



WPI

Neurotype Cafe Visual Novel

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Abstract

We designed, developed, and tested *Neurotype Cafe*, a visual novel video game about a young autistic woman with ADHD, Nia, who works in a cafe. Incorporating digital art, extensive programming, playtesting feedback, and game design principles, *Neurotype Cafe* was designed, written, and programmed by a core team of three students with art developed by four independent study students. The game explores themes of self-acceptance, anti-perfectionism, and bridging communication gaps between different ways of experiencing the world, centering the perspective of a neurodivergent main character. The primary goal of this game was to depict everyday experiences of neurodivergent people through both narrative events and game mechanics that both neurodivergent and neurotypical audiences can appreciate.

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1 - Vision

1.1 - Concept

Neurotype Cafe was originally conceived as a visual novel set in a cafe starring neurodivergent characters. “Neurodivergent” is an umbrella term including autism and ADHD, and can also include dyslexia, OCD, and other minority neurotypes, and emphasizes that no neurotype is more valuable than others (Baumer & Frueh, 2021). It is from this framework and its emphasis on accepting many neurotypes that *Neurotype Cafe*’s title and themes are derived.

This core concept has been maintained throughout development of the game; *Neurotype Cafe* follows Nia (she/her), an autistic cafe worker with ADHD navigating life and the workplace. Throughout the game, she prepares drinks for a plethora of eccentric customers while managing her own finite energy level. The drinks the player prepares and the conversation choices they make (in the role of Nia) change the player’s standing with characters, impacting immediate conversation trees and individualized character endings. Through these mechanics, core themes of self-acceptance, anti-perfectionism, bridging communication gaps between different ways of experiencing the world, and more are explored. A full list of the six core themes of the game can be found in Section 4.1: Themes. A screenshot of the game’s title screen is provided in Figure 1 below:



Figure 1: The game’s title screen, displaying a coffee cup, the game’s logo (featuring railroad tracks, and menu options).

1.2 - Design goals

As many portrayals of neurodivergent characters fall prey to stereotypes and tokenism, significant effort during the development of *Neurotype Cafe* was dedicated to ensuring that the portrayal of life in the service industry as a neurodivergent worker was portrayed thoughtfully. Significant thought also went into portrayals of intersectional identities, such as when writing autistic cisgender women and Deaf, nonspeaking characters. These identities, often underrepresented in media, often fall into negative portrayals the team wanted to avoid (Grimmer, 2023; Gangwish, 2019). Research on portrayals of these identities in media is detailed further in Section 3: Research.

Initial conceiving for the game considered a more mystery-centric plot that the main character would unravel, but the team instead decided to focus on a more everyday, character-focused approach, following the main character simply working her first few days at the cafe. This was chosen to sidestep common, stereotypical presentations of neurodivergence that are most often seen in media, such as emotionless savant detectives with near-magical mystery solving abilities (Loftis, 2015). This approach also was chosen to emphasize the victories and difficulties inherent in completing everyday tasks as a neurodivergent person in a world built for neurotypical people. Harnessing both the positive and negative experiences of working in such an environment is woven heavily into the design of the story's events and themes, as well as the mechanics of guessing customer orders and receiving feedback.

Nia is a character that would likely be a supporting character in a typical narrative due to her occupation and neurodivergence, but in this game, the events of the story are seen from her point of view, centering her perspective. Though the game was conceptualized with a focus on neurodivergence, Nia is more than her neurotype; she has a complex personality, interests, goals, and her own rich inner world. Additional inspiration for the events of the story, as well as Nia's behavior, was drawn from the life experiences of neurodivergent team members.

The priorities of development were laid out as four core pillars, from most to least important to the design:

1. First and foremost, this game is a representation of neurodivergent experiences.
2. Next, it is a visual novel with dialogue and game mechanics that explore and accentuate our core themes.
3. Third, the game takes place in a cafe and depicts working in the service industry.
4. Finally, it has a drink-making minigame that enhances the player experience, advances the narrative, and represents some of the core themes of the game.

1.3 - Target audience

While *Neurotype Cafe* is intended to be accessible to neurotypical audiences, its portrayal of a neurodivergent experience, and its choice of a neurodiverse lead character, is targeted primarily towards neurodivergent players and supported by its status as a semi-autobiographical work of fiction. One goal for the game was to provide an authentic portrayal of a neurodivergent

experience, offering autistic/ADHD audiences a story that both represents them beyond existing stereotypes and serves as an compelling story in and of itself. Our hope is that in the portrayal of these experiences, an understanding of the struggles and thought processes of neurodivergent people will be better understood by all players. Video games as a medium are particularly well-suited to engender understanding because the player is invited to identify with the main character, typically by playing as them. For neurotypical players, we hope this helps them to understand what can be done to make existing in the world a little bit more comfortable for neurodiverse people. For neurodivergent players, we hope to give them the powerful and important experience of seeing themselves represented in a work of fiction. We anticipate that the story's themes of struggling in a service industry job will primarily appeal to working class audiences.

2 - Project Management

2.1 - Project work structure

Group discussions on priorities, tasks, and the overall direction of the game took place in two weekly team meetings and a weekly advisor meeting, allowing for frequent check-ins as well as timely readjustment of project goals. Teammates and advisors had frequent access to each other via Discord messaging between meetings if the need arose. Due to the relatively short development cycle of the game and non-negotiable deliverable dates, a project methodology closer to Waterfall than Agile proved to be extremely important for ensuring large amounts of work were not thrown out later in development; extensive planning of the game towards the beginning of the project was key. Waterfall, a project management methodology that trades design flexibility and extensive up-front planning for predictable project timelines, was determined by the team to be better for this purpose than Agile, a methodology that trades less planning and predictability for greater flexibility (Hoory & Bottorff, 2022). The use of Trello (Trello, 2023) was attempted, but the overhead involved proved to not accommodate the working needs of a small team without a dedicated team manager.

2.2 - Writing a story in code

As the game engine used for this project, Ren'Py, was designed to be a lightweight, simple scripting language accessible by non-programmers, it was decided that writing would take place on a separate code branch using Visual Studio Code (Microsoft, 2023), with merges completed by programmers on a weekly basis. If non-programmer team members ever needed access to the code, it would be done so using the accessible Github Desktop (GitHub Inc., 2023) interface. This approach saved massive amounts of time that would have otherwise been spent translating narrative script documents into code; it also encouraged writers to be conscious of the length of lines and the flow of dialogue in-engine. However, this also meant that some minor effort had to be spent teaching writers to use Visual Studio Code, Github Desktop, and the

Ren'Py scripting language. It also meant that the team had to create its own standards for editing and posting comments to the writing of other team members, as Visual Studio Code does not provide access to collaborative commenting tools like Google Drive (Alphabet Inc., 2023) does. This proved to be a minor disruption; weekly uploads of progress as well as mandatory weekly review of comments on one's own writing allowed the team flexibility while maintaining the efficiency of writing the story directly in the game's code (alongside some planning documents hosted via Google Drive).

3 - Research

3.1 - Game Engines

The primary potential engines considered for this game were Godot (Godot, 2023) and Ren'Py (Ren'Py, 2023). For each engine, the availability of built-in tools for visual novels was considered as well as the flexibility that the engine offers for custom game mechanics and minigames. Early in development, the team decided that we wanted to include a drink preparation minigame to provide gameplay depth, identity, and variety, as well as to depict the responsibilities of service workers. Godot provides many options for custom mechanics and minigames, but has minimal built-in support for visual novels. Ren'Py, an engine specifically designed for creating visual novels, offers robust, built-in support for visual novel mechanics like text progression and portrait displays, but minimal options for custom mechanics or minigames.

Given the team's clear vision of the drink preparation minigame as a menu of clickable options, we were confident that the cost of implementing those features within the limitations of Ren'Py was less than the cost of reproducing visual novel mechanics from scratch in an engine that allows more customization. While the minigame and custom mechanics are a significant part of the gameplay, the game is first and foremost a visual novel, so the team decided to prioritize using the best engine for creating a visual novel and work within its limitations. This decision also allowed the team additional time to focus on polishing the game's menus and text engine, which would be the player's primary form of interaction with the game.

3.2 - Neurodivergence

In part, the goal of this game was to tell a story about the experiences of a well-rounded neurodivergent character. As such, the team conducted significant research on neurodivergence and neurodivergent representation in media.

Representation of autism in the media often relies on stereotypes that either only accurately depict a small portion of autistic people or misrepresent autism entirely. One such stereotype is the representation of autism as an enigma or puzzle. Many popular autistic characters are symbols of difference and otherness. This can lead to the harmful perception that autism is something to be solved or cured, which can lead to autistic people being treated as "more a puzzle than a person" (Loftis, 2015). This stereotype is so prevalent that one of the

widely used symbols for autism is a puzzle piece, which has been criticized for its framing of autistic individuals as infantile and puzzling (Jessop, 2019). Another common stereotype is the autistic detective, who is often an eccentric genius that doesn't engage "properly" with social norms, but whose extreme intelligence allows him to solve cases. This stereotypical archetype is more often than not male; popular examples include BBC's *Sherlock* and its titular main character (McGuigan, 2010) and *Rain Man*'s Raymond Babbitt (Levinson, 1998). It is worth noting that this trope is a subtype of the broader autistic savant trope, which includes characters like *The Good Doctor*'s Dr. Shaun Murphy (Gordon, 2017) and *The Big Bang Theory*'s Sheldon Cooper (Burrows, 2007). While some autistic people do experience higher-than-average intelligence, the majority do not, which means the exclusive representation of this neurotype excludes the majority of autistic people's experiences. This archetype can also lead to the perception that autistic people must have some sort of exceptional skill to compensate for their disability in order to be liked or valuable (Loftis, 2015). This narrative is ableist in that it reduces the potential value of a disabled person to their ability to serve capital in the same ways as an abled counterpart, discarding disabled people who are unable to work and reducing working disabled people from full people to their productivity (Loftis, 2015). Another common trope for autistic characters is that they are incapable of feeling emotions or empathy; this is untrue of real autistic people, and representing characters in this way can cause real autistic people to be misunderstood by those who have only seen this inaccurate representation (Loftis, 2015). Finally, it is common for autistic people who are nonspeaking to be represented as not understanding language or the world around them (RDIconnect, 2022). The preference of nonverbal communication does not equate to a lack of thoughts, and this misrepresentation often results in an institutionally-reinforced lack of agency for autistic people (Tougaw & Ledoux, 2018). It is for this reason that the political slogan "Non-speaking does not equal non-thinking" has become a mainstay among non-speaking autistic people (Morgan & Morgan, 2021).

Representation of ADHD in the media is also inundated with harmful and inaccurate stereotypes. People with ADHD are often used in stories as a representation of otherness and little more. They are often depicted as "abnormal and in need of medicalised solutions" (Horton-Salway & Davies, 2018). This type of representation, of course, sets the harmful precedent that people with ADHD are less than those without because of their neurodivergence. (Horton-Salway & Davies, 2018). Characters with ADHD are also often described within media from the outside perspective of a neurotypical person; this creates representations that show what a person with ADHD might look like from the outside, but do nothing to convey the actual experiences of the neurodivergent person themselves (Horton-Salway & Davies, 2018). Representation of ADHD, like autism, is also predominantly focused on boys and men. The lack of representation of women and nonbinary people with ADHD creates the misconception that only boys can have ADHD (Horton-Salway & Davies, 2018), contributing to the massive underdiagnosis of ADHD in non-men (Lockwood et al., 2020).

While the majority of media about neurodivergent people relies on these harmful stereotypes, there are examples of media that use strategies to more accurately represent

neurodivergent experiences. Some autistic writers force the reader to engage with the world from their point of view by utilizing less typical descriptions and humor that pokes fun at social norms (Tougaw & Ledoux, 2018). Another strategy is to reframe the representation of certain neurodivergent experiences—for example, behaviors such as repetition of language or intense focus on special interests are often described as symptoms of autism. Rather than describing these behaviors as “symptoms,” reframing them as activities that are enjoyable or pleasing for autistic people fights the narrative that autistic people have no agency as well as the narrative that the experience of being autistic is an inherently negative one (Tougaw & Ledoux, 2018).

3.3 - Deaf and Hard-of-Hearing Communities

As the team planned to include a character who experiences profound hearing loss, we did some research into Deaf and hard-of-hearing communities to ensure the portrayal of that character was realistic and respectful. This primarily consisted of reading content hosted online by Deaf/hard-of-hearing advocacy organizations (Frasu, A. & Wiggins, E., n.d.; Hear Me Out! [CC], 2023; ConnectHear, 2023; National Association of the Deaf, 2023), personal blogs, and social communities (the subreddit r/deaf on Reddit and the hashtag #Deaf on Twitter). The primary objectives of this research were to understand the terminology Deaf/hard-of-hearing communities use to describe themselves, to discover common media tropes to avoid reproducing, and to replicate the life experiences of Deaf/hard-of-hearing people.

Liuna (they/them), a character in-game, experiences profound hearing loss and is nonspeaking. Many terms used by those who experience hearing loss are self-ascribed labels. For example, they often describe themselves as capital-D “Deaf” if they consider themselves “culturally Deaf,” are part of the larger Deaf community, and/or generally take pride in their Deaf identity. Oftentimes, they do consider themselves disabled, but identify with a social model of disability rather than with a medical model; they emphasize that they have been rendered disabled by society’s active choice to exclude their way of interacting with the world (Inclusion London, 2023). Those who do not identify with this community, actively integrate with the hearing world, and/or otherwise tend to consider themselves disabled by their hearing loss according to a medical model often prefer the label lowercase-d “deaf.” Additionally, description of the *condition* of deafness typically uses a lowercase d (Frasu, n.d.a; Frasu, n.d.b). Terms like “Hearing impaired,” “Deaf-mute,” and “Deaf and dumb” are generally considered offensive, especially by culturally Deaf communities (National Center on Disability and Journalism, 2021). These are, of course, general trends; many people do not fit into this simple categorization, and terms like “d/Deaf,” “hard of hearing,” “deaf and hard of hearing,” and “DHH” are also used for various reasons, and respecting self-identified labels is most important ((Frasu, n.d.a). Given Liuna’s character—confident, socially active, and proud—as well as their profound, lifelong hearing loss, and signing of American Sign Language (ASL), the team decided Liuna would self-identify in-game as Deaf. Among other terms, Liuna uses the terms “voice” (to speak orally, especially as a translator from a sign language to a spoken language) (Mahoney, 2021), and “sign” (to communicate using a sign language) (National Institute on

Deafness and Other Communication Disorders, 2021). When reviewing the game's script, the team realized that Liuna's dialogue used phrases like "talk your ear off" and "use ASL." The former was removed and the latter was changed to "sign ASL" for the final release.

Another important aspect of representing a Deaf character thoughtfully was the investigation of common misconceptions about Deaf people and harmful tropes about the characters that represent them. For example, dislike is commonly expressed for the implication that hearing loss is to be pitied (e.g., saying "I'm so sorry" in reference to someone's hearing loss) (Cook, 2015; Matheson, 2018). Representation of lip-reading is often depicted in media as an exact, fully reliable practice, but in reality, is an inexact art heavily dependent on context (Relay South Dakota, 2022). Deaf people often experience conversation partners raising their voices, assuming it will help them hear (Schacter, 2020); Liuna makes reference to this when meeting Nia, referring to a rude past conversation partner as "audist" (discriminatory based on the ability to hear) (Bauman, 2018). Other misconceptions include the idea that Deaf people are unintelligent, need to be "fixed" or "cured", have blunt social skills, or need to be talked to slowly (Schacter, 2020).

In faithfully representing a Deaf character, especially in a game with themes of bridging communication gaps, it was important to the team to portray the struggles of existing as a Deaf individual in modern society while also not implying that life as a Deaf person is entirely suffering. Liuna speaks about their struggles in the workplace and in life as a Deaf person, but also expresses their artistic passions, gushes about their romantic partner, and, in general, is more than simply their Deafness. Liuna is successful and has learned how to live in a world with a prevalent hearing culture, but not without struggle.

3.4 - Nonspeaking Communities

Liuna is also nonspeaking, and thus, the team did similar research to understand how to thoughtfully represent this aspect of Liuna's existence. The term "nonspeaking" is frequently applied to various peoples—particularly, those who can communicate but do not primarily do so through vocal cords— and, like d/Deaf, is often a self-chosen label (Neuroclastic, 2021). In general, less information and less definitive terminology was available for nonspeaking communities; one of the largest online communities the team was able to locate, Reddit's r/mute subreddit, is named using the term "mute," which is variably considered offensive (*Is the term "mute" offensive?*, 2023). Like deafness, it is debated whether being nonspeaking should be considered a disability, and self-identification should be prioritized (Riggs, 2021). Among other terms, common labels chosen by nonspeaking people include "nonspeaking" (alternatively, "non-speaking"), "nonverbal," and "mute" (CriticalSorcery, 2022; Literally Ausome, 2022). "Selectively mute," and "situationally mute," "electively mute," "semispeaking," and "semiverbal" are terms used with intersecting semispeaking communities (Grace, 2021; Literally Ausome, 2022). There is also significant overlap between these communities and autistic communities, as being nonspeaking and being autistic can often go hand-in-hand (Zauderer, 2022). The team decided that Liuna would self-identify as "nonspeaking," as they do not

communicate primarily through their vocal cords and have not done so since birth; Liuna communicates with speaking characters by writing in a sketchpad they carry, being an artist. Liuna also signs ASL with those who also sign, including their romantic partner. Liuna also introduces themself to people they do not know using a dedicated page of their sketchpad that includes their name, pronouns, and preferred communication methods. This is directly lifted from the common use of tablets, phones, sign languages, writing, and other forms of communication used by nonspeaking people (Jules, n.d.).

Additionally, the team took care to avoid harmful tropes and stereotypes about nonspeaking people. Common examples include the idea that nonspeaking people are unintelligent, are incapable of communication, and/or do not process language/the world around them (Communication First, 2021; McGann, 2021). In general, Liuna is portrayed as intelligent and experienced through discussion of their life and passions. Another harmful trope is the use of nonspeaking characters as exoticized plot devices, and not characters representing people with deep personalities (Jules, n.d.; Writing Haven, 2021). While replication of this trope was largely sidestepped by ensuring Liuna was a multifaceted, interesting character, the team took special care to make sure that Liuna and Nia's relationship, which features their growth together, was a mutually beneficial relationship.

3.5 - Influences

Inspiration for the game's drink-creation mechanics was largely taken from other games with similar premises; *Coffee Talk* (Toge Productions, 2020) and *VAII-Hall-A* (Sukeban Games, 2019) both feature drink-preparation games where the customer is given hints towards an order and asked to pick ingredients. The arrangement of ingredients as buttons on-screen, the cutaway to a separate preparation screen, audio feedback for ingredient selection, and the general flow of drink preparation are inspired by these games.

The general structure of customer interactions was also inspired by these games. Customers enter the cafe, have some conversation with Nia, order drinks, and then a longer conversation about deeper subjects follows. This interaction, as well as the main character being a service industry worker to facilitate it, was inspired by *VAII-Hall-A*.

Dialogue systems were inspired by other visual novels; in particular, *Doki Doki Literature Club* (Team Salvato, 2017), whose UI layout (which was produced using Ren'Py) and method of moving characters forward while speaking were replicated.

4 - Narrative

4.1 - Themes

Before describing the narrative itself, we will briefly outline the core themes of *Neurotype Cafe*. Many of these themes were informed by the personal experiences of our team's neurodivergent members and were designed to be especially relevant to neurodivergent people.

However, we also thought it was necessary for our themes to be accessible enough that they would resonate with players regardless of their backgrounds. We set out to explore six core themes throughout the game's narrative. They are as follows:

1. Finding self-acceptance, self-confidence, and self worth. Learning not to compromise on or hide your identity to appease others.
2. The effects of being perceived by society as different or abnormal.
3. Being unable to engage in everything that's happening around you, which leads to the feeling of taking a passive role in your own life.
4. Handling personal needs, social expectations, and work expectations takes energy. Neurodivergent people often have to budget their energy and sometimes don't have enough energy to complete all tasks in a day.
5. Perfectionism can lead to burnout and leave you unable to perform well later. Accepting failure is an acceptable and sometimes necessary way to move forward.
6. Bridging gaps between different ways of communicating and experiencing the world.

4.2 - Structure

The game's narrative consists of three acts. The first act spans approximately one in-game work week (17 “events,” each focusing on interacting with a single supporting character) and consists of Nia, the main character, and by extension, the player, learning how to work in the cafe and serve customers. Nia is introduced to the various characters, including her boss, coworker, and the three customers, and learns about them through various interactions. One of the customer interactions during this arc mentions a new luxury passenger train that directly impacts the events of act two.

The first act was designed to take place over one full work week for two key reasons. Firstly, this structure allowed for at least two full interactions between Nia and the various supporting characters before the pace of the story accelerates in act two. Generally, the first interaction was used to establish each character's personality, occupation, and interests, and the second interaction was used to plant the seeds of their character arc. Secondly, this was crucial in setting the overall pacing of the narrative, and gives Nia, and therefore the player, enough time with the characters to make Nia's later interactions more natural.

Between the first and second acts, the luxury passenger train starts its first journey. The train, in addition to its passengers, is also transporting valuables. One of those valuables goes missing before it arrives in the station.

At the beginning of the second act, which spans one in-game day, the boss informs Nia that the train was robbed just before it arrived at the station and as a result, the police have prevented everyone from leaving the station until the culprit is apprehended. During this act, the police are trying to solve who committed the robbery off-screen. As a result, Nia spends the day dealing with the increase in customers caused by the station lockdown, as well as continuing to interact with and develop relationships with the characters she met in act one. Nia copes with the

repercussions of people solving the crime around her, but she does not actively participate in solving the mystery.

Despite act two only spanning one in-game day, the amount of content is comparable to act one with 18 events. Act two was designed this way in order to be narratively and thematically cohesive. We felt it was appropriate for the train station lock down to last the duration of Nia's work day. If the lockdown was longer, the situation would fundamentally change to include considerations outside of the realm of a cafe worker and pull the focus away from Nia's struggles in the service industry. Thematically, we felt that this time frame would make act two feel fast-paced and condensed, as Nia would have significantly more customers and responsibilities than normal in the same amount of time. This situation would naturally lead to Nia becoming overwhelmed and having to take a break.

During the first half of act 2, the large number of customers causes Nia to become increasingly overwhelmed. The increase in noise as well as the need to multitask to keep up with the influx of customers creates an overstimulating environment for Nia which eventually leads to her experiencing sensory overload. Her boss, Amari (she/her), notices that something is wrong and sends Nia to the break room, where Nia then has an autistic meltdown. These scenes were written based on the personal experiences of neurodivergent team members to convey the complex and unpleasant physical and mental experience of a meltdown while still treating the situation with respect. Once the meltdown has passed, Nia chooses to return to work for the remainder of the day. In the second half of the act, Nia continues to serve customers as usual, but the draining experience of having a meltdown impacts her interactions for the rest of the day and she discusses the experience with some of the characters that she trusts.

Between the second and third acts, the stolen heirloom is located and the culprit is apprehended. There is an approximate week timeskip between act two and act three.

The third act spans two in-game days (8-13 events or interactions depending on the amount of favor earned with each individual character). In this act, Nia has settled into working at the cafe, and has reached a state of balance and contentment with her job. Through news headlines and conversations with characters, the player learns how the mystery was resolved, though it is not a focus of the narrative; the consequences of dealing with the chaos of the second act that Nia experiences is centered. Over the course of the two days, Nia interacts with each of the other customers, the co-worker, and the boss one more time. For the boss, Nia has an opportunity to seek closure regarding her meltdown and move forward, while the boss reflects on her mistakes and declares her intentions to be a better manager in the future. For each of the other characters, there are two possible final interactions; in one ending, the character mentions an event they have coming up, but does not invite the main character to attend; in the other, the character invites the main character to that event. For each character, which ending the player gets is determined by how much favor they gained with that character through the drinks they prepared and their conversation choices throughout the game. The player can go to multiple characters' events assuming they have the required favor with each character.

5 - Setting

The setting for *Neurotype Cafe* is The Junction Cafe, a small family-owned coffee shop located within a metropolitan train station. We avoided describing details of the train station such as its name that might link it to a specific real-world location because leaving the location open to interpretation would give us more creative flexibility and make the story relatable to a larger audience.

The Junction Cafe is located underground as part of a line of shops located close to the station's subway boarding platforms, and as such, the lighting is artificial and constant regardless of time of day. This lighting, along with a dark, but warm, color palette, promotes a cozy and mundane atmosphere. The side and front walls of the cafe are gray brick, and the back wall is plaster painted a muted color. There are chalkboard menus on the back wall behind the counter with Hollywood vanity lights above them. The front windows look out into the train station. The counter, tables, and chairs are wood and metal, and the floor is tile. Above ground, there are passenger trains, including the luxury passenger train that causes the events of act two.

We had two major goals in mind when determining this setting. Firstly, we knew that we wanted to have the game take place in a location associated with the service industry. Furthermore, a coffee shop would serve this purpose while also justifying an atmosphere that we felt would best accentuate our core themes. Secondly, the game taking place in a train station serves as a narrative excuse to significantly increase the number of customers and overall chaos in the coffee shop during act two of the story. Finding a natural way to increase tension and the feeling of being overwhelmed was important for the exploration of those themes.

6 - Characters

The game includes six characters: the main character, a boss, a coworker, and three customers. Of these characters, the player can gain favor with the coworker and the three customers, the boss excluded for the sake of managing project scope. The team allocated most of these roles to customers because customers comprise the majority of social interactions in service industry jobs. We also considered the often-mandatory social interaction with coworkers and supervisors to be a critical part of service industry work that should be represented in-game. In particular, the team wanted to explore existing alongside those who you must work with that do not accept you, and the pressure-inducing relationship between worker and boss.

Nia (she/her), the main character, is a seventeen-year-old woman who works as a waitress at The Junction Cafe. She is a curious, somewhat internally-snarky autistic person with ADHD who, because of her need for income while she pursues a college education, is forced to adapt to a job in an industry that generally does not account for her needs or way of interacting with the world. She is struggling to cope with how people see her and struggling especially to be understood by those she interacts with. Over the course of the game, she builds self-confidence

and a sense of self-worth. She learns to better advocate for her needs and stand up for her passions and interests when confronted by people that do not understand or respect her, and develops strategies for existing in her work environment.

Amari (she/her), the boss, is a woman in her mid-thirties. She is the owner of The Junction Cafe, and single mother to her seventeen-year-old son, Lucian, who has cerebral palsy. She is kind-hearted, motherly, and accommodating, but can be authoritative if need be. She has high expectations of her employees and can be stern when those expectations are not met.

Amari accepts some parts of Nia and wants to learn how to understand her. She is generally a good boss, but struggles to balance her family responsibilities, financial responsibilities, and managerial responsibilities, which ultimately causes her to be unintentionally neglectful towards Nia. She teaches Nia the basics on performing her job, but fails to check in with Nia or address her concerns, which eventually leads to discussion between the two. Over the course of the game, Amari and Nia bond over their experiences in parent-child relationships where the child is disabled; Amari represents the parental perspective, while Nia represents the child perspective. Amari learns to better understand and care for both Lucian and Nia through these interactions, and the relationship between Amari and Nia strengthens. Their relationship as boss and worker is developed to be more mutually beneficial through their reciprocal care for each other.

Lillia (she/her), the coworker, is a woman in her mid-twenties who is often blunt, arrogant, and condescending. She comes from privilege, and is often pampered by her parents. Unlike Nia, who is forced to work in order to pay for college, she doesn't require the income from her job at the cafe, but works there to appease her parents. She takes the bare-minimum approach to everything, not just because of her financial situation, but because of her personal insecurities and an inferiority complex that she masks with an inflated ego. She comes into conflict with Nia over the latter's need for routine and predictability in her workspace, and her own insecurities about being replaced by Nia.

Lillia does not accept Nia because she does not understand Nia, nor does she attempt to. She has no concept of what being neurodivergent entails. She does not understand that accommodations can take many forms, and that non-physical accommodations are just as valid as physical ones. Lillia initially misunderstands Nia's intentions and believes Nia's actions are an attempt to upstage her in front of Amari. She ignores Nia's needs and refuses to accommodate Nia, which leads to her being seen as rude and entitled. Eventually, Lillia comes to realize that Nia's routines are needs, not preferences. While she never significantly re-examines her perspective or reflects on her own problems, she finds ways to begrudgingly compromise with and respect Nia in order to ensure that they can both work effectively despite their differences. Lillia's role in the story is an adversary that, through her character arc, transitions from being hostile to tolerant, but not friendly. We wanted to represent the reality that one cannot befriend or see eye-to-eye with everyone, and that being okay with that reality is not only acceptable, but often necessary.

Lillia's character was a challenging balancing act; while the team did not want Lillia's privileged and inconsiderate treatment of Nia to be excused, we did want players to be equally as interested in learning more about and getting along with Lillia as Nia is. Lillia's inner world is explored through various hints in conversations with Nia and a cutaway scene with Amari. It is implied that Lillia has given up on self-improvement as she struggles to live up to the memory of her sister, and that Amari once took Lillia under her wing after seeing something in Lillia that she also sees in Nia.

Kimi (she/her), the first customer, is a 21-year-old college student who is kind and understanding. She is a tomboy with a variety of interests, but her true passion is for jazz music. While she is not neurodivergent, she makes an effort to be accommodating and inclusive to everyone. Kimi is naturally outgoing, confident, and strong-willed, and while she has experienced judgment and ostracization by both her parents and her peers for her presentation, and has taken hits to her self-confidence as a result, she remains defiant and true to herself.

Kimi is kind to and accepts Nia, but does not fully understand her. Because her defiance is instinctual to her, she does not fully grasp the effort Nia exerts to mask her emotions. Despite this, she encourages Nia to be herself and to be more confident in her passions. Kimi is not without faults, however, as despite her apparent confidence, she internally wrestles with her self-doubt. This self-doubt is largely perpetuated by her parents, who don't support her musical aspirations or her choice in style or hobbies. By encouraging Nia to be more confident, Kimi enables Nia to encourage her in return, which develops into a mutual friendship. Kimi and Nia's relationship centers on the exploration of self-confidence, defiance in the face of persecution by authority and society, and self-actualization.

Arthur (he/him), the second customer, is a man in his late forties. He is the former heir to Aeternum Technologies, one of the largest tech companies in the world, and is a critically acclaimed film director. As such, he is incredibly knowledgeable about film, business, and foreign languages. He has developed particular ideals regarding how a person should conduct themselves in social interaction to convey self-assurance and respect, and is condescending towards people, like Nia, who don't live up to those ideals.

Arthur does not accept Nia because he thinks he understands her. He sees her as a younger version of himself— someone that he despises. As a result of his personal trauma, he believes that exhibiting any behavior that does not conform to society's expectations is dangerous. He has developed a rigid perspective of what it means to be successful, and what it takes to become successful, and remains steadfast in representing that ideal at the cost of his interests, relationships, and personal expression. Over the course of the game, Nia, in an effort to push back against his criticism, convinces him that while there are people who will discount you if you don't embody an ideal, throwing away every part of you that makes you different is self-destructive. There is room for things in life besides the pursuit of success and room for people that differ from the ideal that society promotes. He realizes that his mindset is toxic, just like his parents' own mindset, and that despite his good intentions in trying to convince her to conform to his ideals, Nia is her own person with her own limitations and goals. It is hinted

through Arthur's behavior that he himself is neurodivergent, and has suppressed himself in service of functioning in a society that does not value his true self. Nia and Arthur's relationship depicts how society's standards can not only suppress those that do not conform to them, but those that *do* conform to them; it also explores how even those hurt by society's standards can enforce those painful standards themselves.

The third customer, Liuna (they/them), is an artist in their early thirties. They are Deaf and do not communicate through speech. They use ASL to communicate with their family and significant other and write in a spiral-bound artist's sketchbook to communicate with people who do not know ASL. They have experience with being treated as an outcast and can relate to Nia's experiences of being labeled as different by society. They are passionate about reading, drawing, and painting, and are currently working on a graphic novel with their significant other.

Liuna not only accepts Nia, but understands her the most. If this story had a prequel, Liuna would likely be the protagonist; by the time they meet Nia, they have already completed a character arc and have grown as an individual as a result of the challenges they have faced. Their past experiences make them a perfect mentor for Nia; Liuna is successful, in a happy relationship, and able to explore their passions daily. Liuna is someone that Nia almost immediately relates to and admires. They embody many of the traits that Nia wishes to have, and their similarities to Nia make Liuna's advice feel more natural and impactful to her. Liuna is the character that is most empathetic towards Nia, and because of this, can encourage Nia to grow in a way that is most effective and considerate. Many of Liuna and Nia's conversations are written as an opportunity for the two to discuss their own interests, creating a relationship that is mutually beneficial for them both. Despite having by far the widest gap to bridge in terms of communication (which is an obstacle the two patiently overcome together), Nia and Liuna make quick friends due to their willingness to accommodate each other's needs.

7 - Writing

One stylistic choice made regarding the writing as a whole was the tense. We decided to write the story in present tense in order to emphasize the feeling that the player is following Nia's journey, including her thoughts, feelings, and growth, in real-time, rather than as a story that is being retold. We felt that a present tense narration would make each event feel more impactful, rather than an insignificant piece of a larger story, and stress that Nia has to juggle several responsibilities in real-time. However, the tense of the story is changed to past tense during the end game events; this was done to provide the sense of finality, to provide the impression that Nia is reflecting on her time with other characters, and to avoid having to display assets the team could not feasibly create (such as new location backgrounds or Liuna's partner).

We also decided to tell the story from a third-person perspective with Nia visible-on screen. Narration is third-person limited so that Nia's internal thoughts and experiences can be represented while still clearly being separate from the narrator. The narration, although third-person, is filtered through the lens of Nia's perception of events. This gives a window into

the main character's thoughts, but not the thoughts of others, allowing for exploration of themes of difficulty with communication. In addition, this method served to control the overall scope of the writing; writing the inner thoughts of every character in the story would have ballooned the overall amount of writing required for the project far beyond what our small team could realistically handle, as well as undermine our focus on Nia's perspective.

The overall tone of the story can be described as cautiously optimistic with splashes of passion and excitement, as well as significant anxiety and distress. The team wanted to represent the often difficult realities of the service industry, but also didn't want to exhaust the player with a relentlessly negative tone. Nia has moments of genuine excitement and passion when interacting with certain customers, but also becomes appropriately frustrated and angry when faced with hurtful experiences.

8 - Design

8.1 - Dialogue System

Given that the game uses Ren'Py, the majority of dialogue systems are customized versions of those included in the Ren'Py engine. This includes the primary text and character portrait displays and also includes useful quality-of-life features such as dialogue history, skip, auto, and save/load of game progress.

A standard visual novel dialogue system is used, with two characters on screen at a time facing each other in three-quarters view; characters are placed this way to suggest that they are conversing. Below the characters, a nameplate is displayed to communicate which character is currently speaking. Speaking characters also move forward towards the player, drawing attention, increasing visual engagement, and providing additional clarification of who the current speaker of each line is. The narrator is not given a nameplate. Nia's internal thoughts are represented through italicized text with her nameplate on it.

Several additional text enhancements, which allow text to move, are also included. These include text that shakes, moves in a wavy pattern, stretches larger or shrinks smaller, scrolls into place slower or faster than the default, and changes in color and font. Several built-in text effects, such as italics and bold text, are also used. These enhancements are used to convey strong tone or emotion in characters' dialogue, especially during a sequence in the second act during which the main character becomes overwhelmed and overstimulated.



Figure 2: An example of a typical gameplay scenario, including dialogue, the energy bar, and two character portraits.

8.2 - Drink preparation minigame

Throughout the game, the main character and by extension, the player, prepares drinks for customers through an ingredient interface, shown in Figure 3 below.

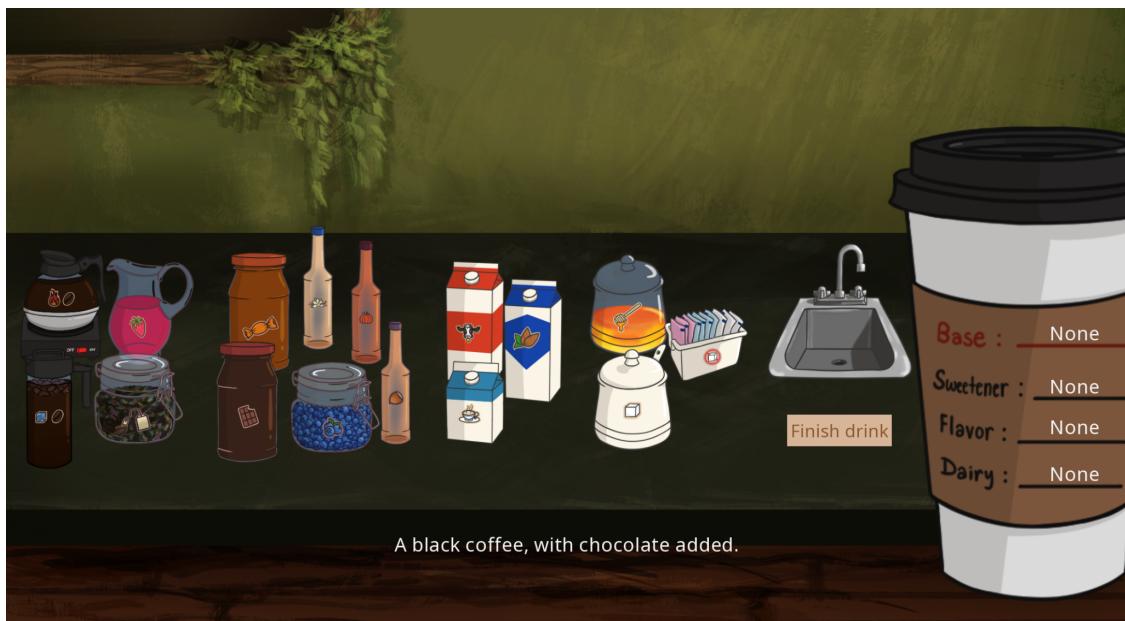


Figure 3: Drink preparation user interface; coffee, tea, flavorings, milks, and sweeteners on a counter next to a sink and a coffee cup with a label that lists the ingredients in the drink.

Players are expected to interpret the orders of customers (displayed at the bottom of the screen) and select the ingredients which will fulfill the customer's order. As the player progresses through the game, clues become increasingly obtuse in a steady difficulty curve. This approach was chosen to represent the interpretive nature of conversation, themes of bridging gaps between different forms of communication, and the responsibilities of a cafe worker. Tooltips were also added to the UI in order to help the player understand the purposes of each interactable element on-screen. As the player selects ingredients, feedback is provided to the player's selection through an audio cue and the display of a preview of their drink, featuring the current ingredients. Additionally, the elements on-screen are laid out left-to-right in order to guide players through the process of creating a drink. Special care was given to the grouping of ingredients in order to communicate that there are distinct categories of ingredients.

8.3 - Energy

The game has an energy system that interacts with both the drink preparation minigame and the dialogue choices. There is an energy bar in the top corner of the screen that, when full, has two units of energy. It resets to full at the beginning of each in-game day. If the player gets a drink order wrong on their first try, they have the choice to remake it. An arbitrary number of retries is allowed for each drink order, but each retry costs a unit of energy. If the player runs out of energy, they can no longer remake drinks until the energy resets the next day. Running out of energy also prevents the player from selecting certain dialogue choices. When the energy bar is empty, certain dialogue choices become grayed out and unselectable. The energy bar is a built-in function in Ren'Py that was customized to link it to the dialogue choices. This mechanic is designed to represent the neurodivergent struggle of having a limited amount of energy and being unable to fully engage in interpersonal interaction once that energy is depleted. The energy system was designed based on the spoon model of disability (Latifi, 2023). This plays into the themes of perfectionism and budgeting energy as a neurodivergent person. Striving for perfection when making orders leaves the player without enough energy to fully engage in interpersonal interactions, so the player must choose carefully what relationships they prioritize according to their own goals. While this mechanic does, of course, implicitly argue to the player that disability can be represented through spoon theory, or otherwise could be quantified by an "energy bar," all mechanical representations of experience involve this problem; assumptions are unavoidable. That considered, this approach was chosen to directly mirror a common paradigm used by disabled people to communicate their own experiences to the world.

8.4 - Favor and dialogue branching

The game also includes a favor system that relates to dialogue choices. For each dialogue choice, choosing one of the options makes the player gain a point of favor with the character they're interacting with. Favor with each character is tracked throughout the game, and at the end, the final interaction with each character is changed depending on how much favor the player

gained with that character. If the player gained more than a certain number of favor points with a character, they get that character's more personal, positive ending; if the player does not meet that threshold with a character, the story instead branches to a less personal, neutral, or negative ending. This is implemented by storing a favor variable for each character and incrementing it when the player makes a dialogue choices that causes a gain in favor, then using those variables for conditional branching of the final interactions with each character. This mechanic is intended to cause the player to engage with the theme of missed opportunities; having a limited amount of energy for social interaction can often leave neurodivergent people feeling like life is happening around them and they're missing out on it. This system of branching endings is designed to have the main character miss out on connections with the characters for which they don't have enough energy to choose the dialogue options that gain favor. The consequences of not meeting the favor threshold for each character are designed to feel significant, but also finite and survivable. They are also designed to encourage "failing forward," the idea that failure is an acceptable way to move forward through the narrative and that the game will respond to that failure (Childs, 2019; The Archmage, 2019). Success and failure in making each drink are designed to feel like two equally valid, alternative narrative pathways.

Additionally, this system was designed to minimize scope and maximize impact. The team wanted to include parts of the game where dialogue branches depending on player choices, but was concerned about scope; if changes in dialogue change the information revealed to the player, or characters take drastically different paths because of choice early in the game, the game must account for those choices throughout the entire game. This can quickly balloon into an unmanageable level of writing and programming effort (Design Doc, 2017). As such, it was decided that changes to dialogue resulting from player choices would be local; a few lines of dialogue immediately following the choice would change, but the information the player needs would be supplied regardless of their choice. Additionally, favor would be maintained for each character throughout the game and change the ending for each character; this allows player choices to feel impactful and make a significant impact in the resolution of character arcs while preventing scope from becoming unmanageable. Local choice branching is illustrated through the diagram in Figure 4 below:

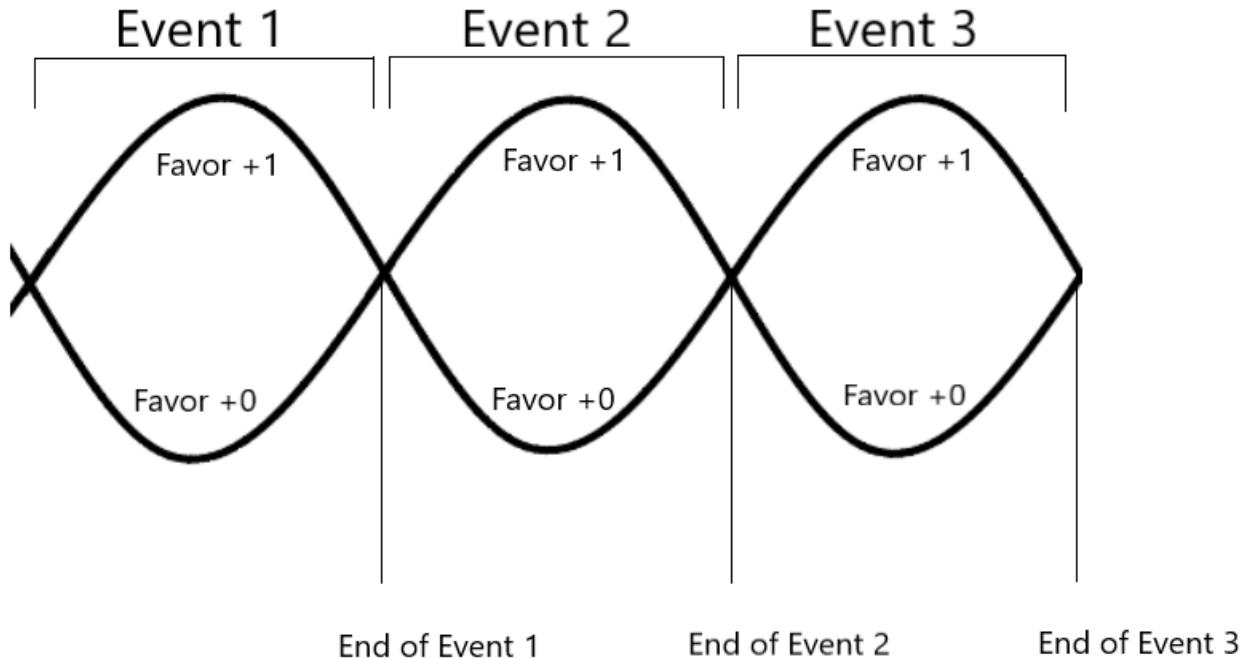


Figure 4: Local choice branching illustrated in a double helix-like pattern. While dialogue will change in the middle of an “Event,” the ultimate outcome of that event is the same regardless of the player’s choices. Favor is tracked across events.

8.5 - Additional features

At the bottom of the dialogue box are clickable menu options that toggle common options (for Skip and Auto) or open their respective sub-menus (for History, Save, Load, and Settings). It was decided that the Save and Load options would be available at all times; while this does allow the players to bypass the trial-and-error nature of the game if they choose to use the save system to reset the game state to before their mistake occurred, this was allowed to remain in the game to allow players to determine the character of their own experience. A note was added that is displayed before the game begins that encourages players to not do so if they do not need to. Additionally, optional audio subtitles and additional visual cues for any sound-based feedback in-game were added to make the game more accessible to deaf and hard-of-hearing players.

9 - Art

9.1 - Art Style

It was important to the team to have a significant amount of art for the game to bring the characters and setting to life. Dividing the work between several artists made this scope possible. One artist worked on concept art, another on character portraits, another on backgrounds, and another on user interface (UI) elements. Each artist brought their own unique style, but good

communication, collaboration, and planning helped ensure that all individual styles could complement each other. Each type of asset had its own unique considerations when choosing a style because of their different functionalities within the game.

9.2 - Characters

The character portraits are designed to reflect not only the personality of each character, but also several specific emotions for the main character. The characters were done in a colored and shaded line art style to allow for the incorporation of clearly recognizable details, for slight exaggeration of facial features to convey emotions, and to stand out against the backgrounds.

To represent the characters' personalities, the team spent time talking to the artist about each character's personality and how it could be incorporated into each character portrait. For example, the character portrait for Amari, shown in Figure 5, includes formal clothing to represent Amari's role as the cafe's owner, an apron to demonstrate her active role in the cafe, a facial expression that suggests friendliness, and a composed, if tired, posture.

To convey emotions, the main character, Nia, has five different poses, each of which corresponds to a different emotion, such as happy, neutral, or upset. Particular attention was given to designing Nia's poses to accurately represent the way that a neurodivergent person might look when experiencing certain emotions. The specific details of the pose designs were drawn primarily from the lived experiences of neurodivergent team members. The two poses most relevant to this are "nervous" and "overwhelmed," which are shown in Figure 5. In the nervous pose, Nia is shown stimming (short for self-stimulating), which is a common self-regulatory autistic behavior (Children's Hospital of Philadelphia Research Institute, 2020). In the overwhelmed pose, the internal experience of becoming overstimulated by one's surroundings is incorporated in Nia's external appearance by an expression of panic and a hunched posture.

Additionally, characters were given a dark chalk outline, which changes according to their current emotional state. As shown in Figure 5, Nia's outline becomes considerably more chaotic for her "overwhelmed" portrait. This outline also serves several other purposes; it helps characters stand out against the backgrounds, provides the characters a greater sense of physicality, ties to the chalkboards present in the cafe, and contributes to a unique sense of style for the game's visuals.



Figure 5: Left: Character portrait for Amari; center: nervous character portrait for Nia; right: overwhelmed character portrait for Nia

9.3 - Backgrounds

The main goal of the backgrounds was to convey a cozy but industrial feel for the cafe. The cafe was designed to feel welcoming, but also realistically capture the industrial look of an underground train station, particularly when it came to lighting. After some discussion with the background artist, a painterly style was chosen for the backgrounds to convey the environment of the cafe while still allowing characters to stand out against it. An example of one of the backgrounds is included in Figure 6.

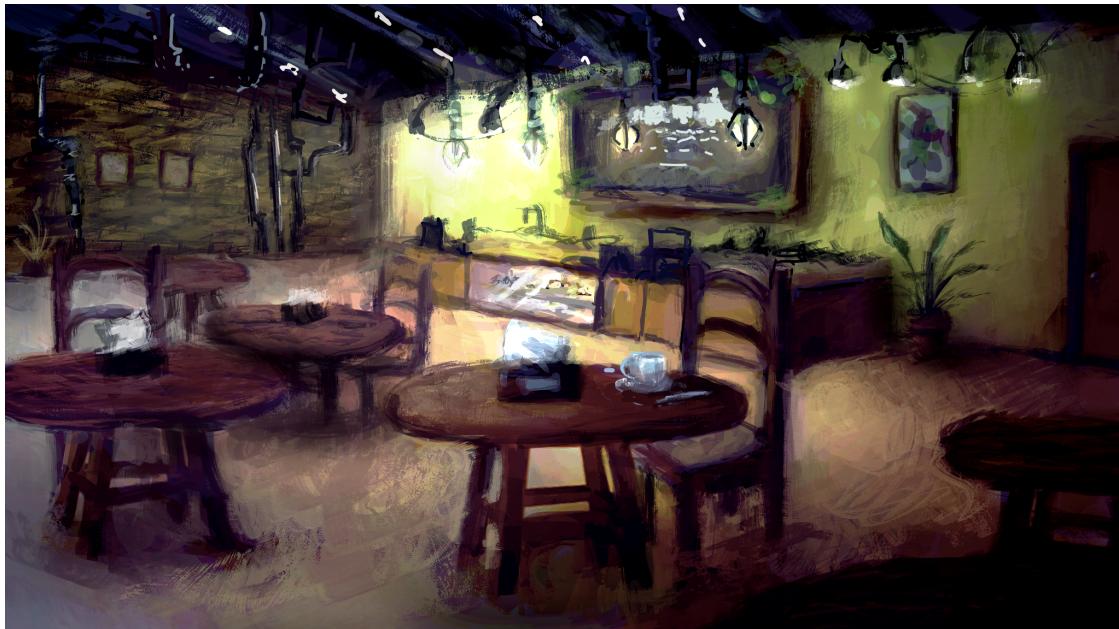


Figure 6: The cafe counter background. The front counter and tables of the cafe are depicted in a painterly style.

9.4 - UI Elements

The UI elements were done in a clean, simple style for recognizability as interactable objects and, by extension, ease of gameplay. Most of the UI elements are assets for the drink-making minigame; their primary purpose is to clearly convey the function of each button, so it was particularly important for them to be easily recognizable. Each of the buttons represents a particular drink ingredient, so the assets are containers holding the ingredient with a clear symbol on the front indicating what the ingredient is. Two examples, the assets for the “hot coffee” and “sugar” buttons are shown below in Figure 7.



Figure 7: “Hot coffee” and “sugar” UI art assets, drawn in a clean style with pronounced lineart.
Includes a coffee burner and a sugar jar.

Other UI assets included elements such as the dialogue box backgrounds, nameplates, and the energy bar. These assets also had fairly simple designs, as their primary purpose was to be non-distracting and functional. These assets were created to replace the default options provided by Ren’Py to better fit the color scheme and aesthetic of the game. Another reason for the custom dialogue box backgrounds was to represent the communication styles of each of the characters; when communicating with Liuna, a paper background is used to visually convey the difference in communication styles to other characters (which also impacted how their dialogue was written). There are two dialogue box backgrounds: one in a solid color, and one with notebook lines, which can both be seen in Figure 8.



Figure 8: Dialogue box backgrounds. Top: default dialogue box with flat coloring; bottom: Liuna-specific dialogue box designed to resemble ruled paper.

10 - Audio

10.1 - Sourcing

As no dedicated sound designer was present on the team for this project, the majority of audio assets were sourced from royalty-free audio websites. Sound effects were taken from Freesound (Freesound, 2023), music from Jamendo (Jamendo, 2023), and some additional sound effects were produced using SFB Game's *Chiptone* (SFB Games, 2023). More sound effects were captured as foley sound, which are sound effects that are recorded while watching the visuals to which they will correspond (Contis, 2022). Foley capture involved the recording of paper shuffles, utensil clinks, and various other sounds that would make up a cafe soundscape. Audio generated by the MQP team also included anonymous ambient noise captured from campus locations, such as crowd chatter, that could fill the game's soundscape. Even more ambient sounds were captured from Boston's South Station, a busy train station.

10.2 - Goals

One of the primary goals of the audio design was to provide a sense of the cafe's positioning in a train station. Several "ambient" assets, including crowd chatter, subway station PA announcements, and train arrivals were used to provide atmosphere to the cafe and the station it is situated in. Additionally, the use of realistic Foley of sounds typically heard in a kitchen (glass clinks, drinks being poured, etc.) provides the interactions in the drink preparation screen a sense of physicality, and provides groundedness to the user interface.

Another goal was to represent neurodivergent attention to sensory information, such as audio. Early in development, the team decided it was important to draw attention to the otherwise innocuous "background noise" that, for neurotypical listeners, is often ignored, but for neurodivergent listeners, is constantly, and often painfully, present. This angle also was made use

of during a critical moment of the plot, where audio becomes painfully overwhelming to mimic the neurodivergent main character's sensory experiences. One of these audio assets, the harsh screech of a train stopping somewhere in the station, is intended to be somewhat uncomfortable to listen to for this purpose. For the drink preparation minigame, realistic sound effects provide both feedback and a satisfying sensory experience for player interaction.

The majority of music in the game, taken from Jamendo's "Ambient" category, is intended to have enough emotional range to support the emotions of the narrative while maintaining a generally relaxed atmosphere. This emphasis on relaxing music is intended to mimic the style of music often heard in coffee shops, as well as keep players relaxed while playing through a narrative that could otherwise feel quite negative and emotionally overwhelming.

11 - Technical Implementation

11.1 - Limitations imposed by Ren'Py

Every project involving programming has unique challenges, and the team knew early on that the primary challenge of this project would not be sheer technical complexity, but rather implementing the custom features and mechanics we'd designed within the limitations of Ren'Py.

One feature that proved difficult to implement in Ren'Py was the mechanic of being unable to select certain dialogue choices when the energy bar is empty. Ren'Py has built in options to make some dialogue choices unselectable, but dialogue choices do not have a built-in attribute that can be set to indicate that they should be unselectable when a certain condition is met. To implement this feature, the team used string parsing as a workaround to tag specific dialogue choices; if a dialogue choice should be unselectable when the energy bar is empty, then the string "(energy)" was added to the end of the choice string for the dialogue choice to tag it as dependent on energy. Then, each time the dialogue choice screen is loaded, string parsing is used to check whether any of the strings for the dialogue choices end with the tag for energy dependence. If an option has the tag, the tag is removed from the string so that it is not displayed to the player and then, if the energy bar is empty, Ren'Py's built-in "NullAction" control action is applied to it, making it unselectable.

11.2 - Text effects

Any text effects that are not included natively in Ren'Py are from a module that the team found online and used in accordance with the open source license of the module (SoDaRa, 2022). The effects in the module are implemented using a combination of two Ren'Py features. The first is Ren'Py Animation and Translation Language (ATL), which can be used to define specific movements that can then be applied to any on-screen asset. The second is Ren'Py text tags, which are used for the limited built-in text effects provided by Ren'Py, such as bold and

italicized text. The module defines custom text tags that apply ATL transforms to the text to cause it to move as defined by the transform.

11.3 - Character Movement

The game makes use of built-in Ren'Py features for displaying characters and moving them across the screen, but also implements several custom transforms to allow for specific character movements that are not built-in. Three custom transforms were implemented that, when applied to a character, cause them to bounce up and down smoothly, vibrate side to side quickly, or shake diagonally and jerkily. Each of these transforms was applied to convey different emotions. The bounce was used to convey that a character is happy or excited, and the vibrate and shake were used to convey that a character is anxious or uncomfortable. These custom transforms are defined using ATL and then called each time they are applied to a character.

Additional transforms are also implemented to cause each character to move slightly forward while they are speaking and then back to their default position when they are no longer speaking. This is a common practice in visual novels that helps the player easily see visually which character is talking. Moving the characters forward and back can be done using ATL, however we wanted these transforms to be applied automatically each time a character is talking. Transforms defined with the ATL are intended to be applied manually each time they are desired and there is no built-in option to apply them automatically whenever a condition is met, so this, like dialogue choices being dependent on energy level, is another feature that required a workaround to be implemented in Ren'Py.

In order to implement the automatic move forward when a character is speaking, we used a Ren'Py feature called a callback function which is not designed to be easily compatible with ATL transforms. A callback function is a function that can be linked to a character and applied anytime they are on-screen. We defined a callback function that, for each character, applies the move forward transform whenever they are speaking and applies the move back transform whenever they stop speaking. This allowed us to apply the transform automatically, but it created a new problem. Since callback functions are not designed to be used with ATL transforms, the only way to apply a transform to a character inside a callback function is to fully reset the list of transforms applied to the character. This created the problem that no additional transforms could be applied while a character was speaking, because the callback function would remove them before they were applied.

As a workaround for this problem, we maintained a list for each character of all the transforms that are currently applied to each and stored it separately from the characters themselves. Then, in the callback function, we checked the separately stored list and reapplied any transforms that were removed by the reset. This workaround allows both the automatic transform that moves the characters forward while they're speaking and the manual transforms such as a bounce to be applied at the same time.

11.4 - Metrics

The source code of the game includes over 6,700 lines of code written by the team. This excludes code taken from the text effects module as well as any default code generated by Ren'Py. Of those lines, more than 3,200 are lines that display dialogue or narration and more than 3,500 are lines that implement game mechanics. It is estimated that a playthrough of the game takes at least 2.5 hours (highly dependent on reading speed).

12 - Evaluation (Playtesting)

12.1 - Process

Throughout the development process, feedback on the success of the game's concept, rhetoric, mechanics, writing, and other features was gathered to guide development. Feedback was gathered in a few rounds, listed below:

Round 1: Feedback taken from the IMGD Protofest event (October 26th, 2022). Other MQP teams and IMGD faculty were asked for feedback on a pitch of the game's core concept, as well as feedback on some basic mechanical descriptions. As this event occurred very early during the game's development process, questions focused on ensuring that the basic plan for the game was solid.

Round 2: Feedback taken from the IMGD Alphafest event (November 11th, 2022). Students who voluntarily attended the event had the opportunity to play an early build of the game and were asked to complete a short survey about their experience afterwards. Questions asked focused on interaction with core mechanics (diverging dialogue based on choices, energy system, etc.) and the readability of the UI, including character expressions changing during dialogue.

Round 3: Feedback taken from a writing test (February 15th, 2023). Project advisors were given a build of the game for the purposes of testing flow of dialogue, writing style, atmosphere, formatting of the narrator, and sensitivity concerns.

Round 4: Feedback taken from asynchronous playtesting (Sent out February 28th, 2023). IMGD students were asked, by email, if they would like to participate in playtesting. This process was entirely asynchronous (partially due to time and resource constraints our team was experiencing). Participants were asked to download a linked build of the game and complete a linked survey about their experience playing the build. Questions focused on the likeability of characters, player interest in learning more about the characters, and engagement with core game systems (drink creation, energy, choice branching, etc.)

Round 5: Feedback taken from an IMGD colloquium playtesting event (April 12th, 2023). Students who voluntarily attended the event were given the same build and survey sent out to asynchronous playtesters, but the team got the chance to directly witness players engaging with the game.

Round 6: Feedback taken from the IMGD Showfest event (April 28th, 2023). Students who voluntarily attended the event had the opportunity to play an early build of the game and were asked to complete a short survey about their experience afterwards. At this point in the evaluation process, the game was nearing completion, so questions focused on identifying parts of the game that could be polished for the final build.

It is also worth noting that as playtesters were part of the WPI community (including students and project advisors who personally knew the development team). Playtesters were also offered the appearance of their name in the game's credits sequence and playtesting credit for completing playtesting (the latter of which is required for WPI students taking IMGD classes). Because of these factors, the results of feedback may have been biased.

12.2 - Feedback received and implementation

Discussion of the game's premise at the IMGD Protifest event served as valuable inspiration for the game's development. Responses to the trial-and-error nature of the energy and drink preparation systems were positive, and it was suggested that frustration in this replay loop could be mitigated by acknowledging player frustration and making it clear that it was an intended part of the experience. The introduction of frequent comedic levity to the game's script was also suggested for this purpose. An additional suggestion of a "memory bank" where failed orders were recorded was also intended to be incorporated as a set of notes Nia keeps on each customer's responses to the drinks she prepares.

Playtesters throughout the game's development process responded well to the game's user interface for dialogue, indicating that it was easy to understand how to advance dialogue, use the built-in Ren'Py save system, and read text. Players also appreciated how characters moved forward when talking, making it easier for them to tell which character was speaking at any given time. Additionally, players praised dialogue effects, such as the use of shaking and wavy text, stating that they added emotion to the script. Players also praised how characters moved across the screen to mimic movement.



Figure 9: Survey responses to questions about the likeability and intrigue of an in-game character. Despite largely disliking Lillia as a person, players indicated that they were interested in learning more about her.

Additionally, players also enjoyed the game script’s overall writing style. Players were asked to rate characters on both the character’s likeability and the player’s interest in learning more about that character; responses indicated that players were interested in learning more about characters even if they did not find the (intentionally dislikeable) characters “likable.” Many playtesters also were willing to describe characters when asked; this helped the team determine whether characters were coming across to players the way we intended. In particular, Nia was described by players as somewhat of a “pushover,” which encouraged the team to include additional certainty in her inner monologue. Players also were confused by the delineation

between narration, character speech, and Nia's inner monologue; it was decided that characters would move forward when speaking in part for this purpose, and that Nia's inner monologue would consistently be the only part of the game to use italicization in non-emphasized text. Narration was relegated to a textbox without a character nameplate to separate it from the speech of characters. Conversations involving Liuna, who communicates nonverbally using a notebook, change the dialogue box to a notebook-like asset resulting from a suggestion to emphasize the difference in mode of speech.

Players also offered valuable critique of the drink preparation minigame UI. Initial versions lacked ingredient icons and were largely text-based, and players felt it was important that more style and additional clarity be given to the UI (which was accomplished later in development). One player noted that they did not notice that the minigame had not yet started when tutorial dialogue showed over it; to fix this, the minigame is now non-interactable when tutorial dialogue is showing.

Additional UI clarity was also suggested and implemented. Most players did not notice a change in the energy bar when remaking an order or making a dialogue choice; this was corrected by making the energy bar flash when the player loses energy. Players also felt that character portraits blended into backgrounds, so characters were given a chalk-like outline to help them stand out. This change also helped characters feel more physical, added more of a distinct sense of cafe style to the game's visuals, and provided artists the opportunity to express more about character emotions through the direction of the outline. This also meant that expression changes would be more noticeable when they occurred; several players did not notice character expressions change. The difference between a non-outlined portrait and an outlined portrait is demonstrated in Figure 10 below:



Figure 10: A comparison between a chalk portrait (left) and a non-chalk portrait (right) on a background.

Among this feedback, responses to the audio of the game and its resulting atmosphere were positive. Many players also did not interact with the energy mechanics due to getting drinks correct on their first tries, so the game's difficulty was rebalanced to place players into situations where they would have to interact with those mechanics more.

The informed consent agreement, Alphafest playtesting form, and asynchronous playtesting form are included in Appendices C, D, and E respectively.

13 - Rescoping

13.1 - Scrapped Features

Due to the limited development time of the process, and the often unpredictable nature of the school year, several features had to be cut in order to rescope the project to be achievable with the time the team had.

One of these features, briefly mentioned in Section 12.2, was a set of notes that Nia would write down that detailed which drink combinations given to customers were successful and which were unsuccessful. These notes would have been kept for each customer individually, and customer orders would have built upon player knowledge gained from previous interactions with that customer. These notes were intended to help players recall information between play sessions, should they take a long break from playing the game. This feature was also intended to provide some additional characterization to Nia, showing her mechanisms for keeping track of how to communicate with customers, her sense of humor in how she puts down notes, and her proactivity. As this feature was not implemented in time, customer orders were restructured to require less player memorization of customer quirks between interactions. This was stylized as a piece of receipt paper to provide the impression that Nia was improvising a way to keep track of customer orders with whatever was on hand, and is also a common technique used by cafe workers. Notes would have been placed in a toggleable drop-down interface that was not fully implemented. The proposed interface can be seen in Figure 11, and the unused asset for this feature can be seen in Figure 12, both below.

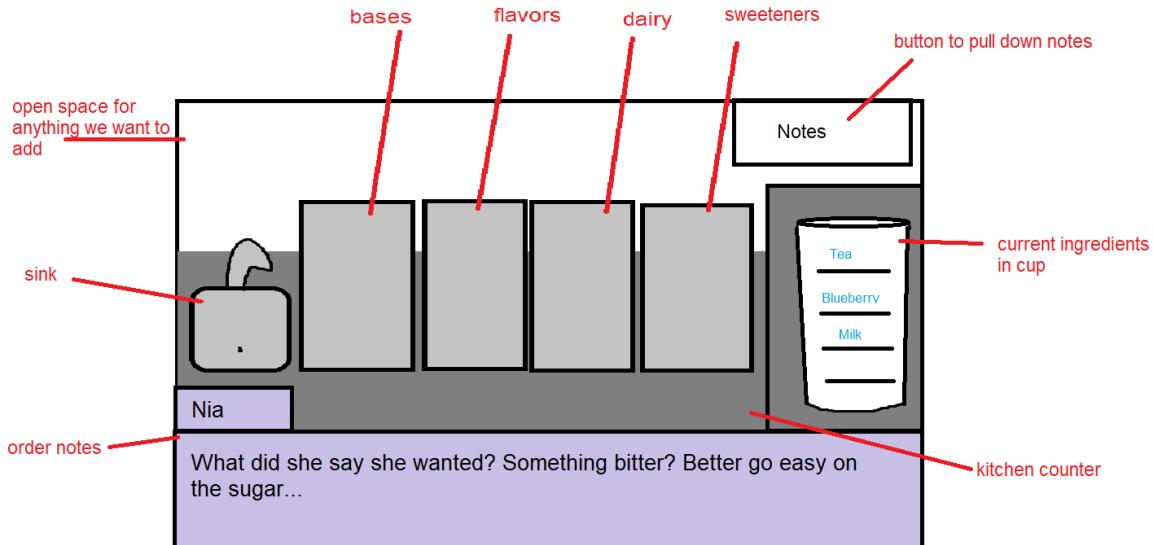


Figure 11: The proposed drink minigame interface. The drink ingredients are grouped by type on the counter and the drop-down tab for the “Notes” feature is placed in the top-right corner.



Figure 12: The unused asset for the “Notes” feature. This was stylized as a piece of receipt paper (with “Order #”, the cafe logo, and “Thanks you for visiting us!” on the receipt).

Other scrapped features include additional character portraits for characters other than Nia, customized pause menu buttons, and individually-drawn name plates for each character to provide additional readability and character. Another additional feature planned for the game that did not see completion was an additional asset on the title screen; Nia's reflection would have been shown looking anxiously into the coffee cup present on the title screen. Additionally, two "Events," one with Liuna and one with Lillia, were scrapped due to time constraints.

13.2 - Future Development

There are plans to continue development past the end of the college year. Many of these plans involve restoring scrapped features; many plans involve expanding on the game's content. Significant work is planned to be done on adding additional dialogue that further develops and solidifies the game's themes. Additional plans include having characters move more dynamically on-screen, panning backgrounds to convey motion when necessary, a direct tutorial for the energy mechanic, and, in general, further mechanical polish. A release is also being considered for the online Steam game marketplace upon completion of these plans (Valve Corporation, 2023).

14 - Conclusion

Neurotype Cafe was designed and executed over a span of eight months. In that timeframe, we created a fully functional video game that stayed true to our core vision, a visual novel told from a neurodivergent perspective that depicts the experiences of an autistic person with ADHD in the service industry. We feel as though we have created an authentic and respectful representation of neurodivergence through a combination of *Neurotype Cafe*'s narrative and gameplay elements. This entire process has been an invaluable experience, allowing us the opportunity to explore the game development process from start to finish as an interdisciplinary team. *Neurotype Cafe* was an ambitious project, and while some elements of the final game, such as the exploration of certain themes and character expression variety, may not have reached our ideal, we are proud of the game we created.

Neurotype Cafe will be available to play on itch.io at <https://lenadias.itch.io/neurotype-cafe> (Dias, L. et al., 2023).

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Appendix A - Character Sheets

When initially designing the characters in the game, the team made a character sheet for each character outlining details of their physical appearance and personality. These character sheets were used as reference throughout the development of the narrative and character portraits. Some details may have been changed for the final release.

Character #1

Part 1: Surface Level

1.1. Absolute Basics

Name: Kimi

Age: 21

Pronouns: she/her

Role: Customer

Race: Asian

Ethnicity: Japanese American

Occupation: College Student (Music Major)

Nationality: American (U.S.)

1.2. Physical Appearance

Eye Color: Chestnut Brown

Build: Petite but athletic build, slight visible muscle definition

Hair Color: Coffee Brown

Hair Style: Above Neck

Typical Clothing:

1. Elastic Cuffed Cargo pants, white high-top sneakers, plain black/navy blue long sleeve sweatshirt
2. Formal Wear: White collared dress shirt with sleeves rolled up to elbows, charcoal gray slacks, suspender straps

Accessories: Headphones, various bands around wrist

Stance/Posture: Relaxed, informal posture

Distinguishing Mannerisms or Habits: Often sits with one knee pulled up against chest while the other hangs off chair, bounces or rocks, plays air drums when listening to music

Other: None

1.3. Communication

General Speech Type: Informal, frequent use of slang

Speech Impediments: None

Instructions for Facial Reactions (Emotive Sprites):

- Neutral: See reference photos

- Happy: Eyes wide, mouth open with tongue sticking out on canine tooth
- Disagreement: Lips moved towards one side, scrunched face
- Laughing?
 - Laugh: Stifled giggle that turns into a leaned back hearty laugh
 - Smile: Fusion of a smile and smirk with one side of mouth more ajar

Part 2: Past and Relationships

2.1. Family:

- Second Generation Japanese-American Mother and Father
 - Father: Construction worker/laborer
 - Mother: Office worker/secretary
 - Parents reluctantly help pay for some college and living expenses out of a sense of familial obligation, but are not very supportive of Kimi's music-oriented career choice
 - Kimi's parents were raised in relative poverty by immigrants, they want what is best for their daughter and are convinced that while harsh, they are doing the right thing
 - "They want her to have what they never did."
 - They pressure Kimi to give up on music as it is not productive towards what they believe is best for her long-term
 - There is a rift between Kimi and her parents due to what they deem "street-rat behavior" (Her tomboyish, informal behavior and speech, attire, and hobbies are undesirable to them and counterproductive).
- No siblings

2.2. Important Relationships:

- Music Instructor (Mr. Walsh)
 - Strict and stern music instructor that beneath his facade is kindhearted and encouraging, Kimi looks up to him and he sees potential in her
- Few college friends that run an extracurricular band together

2.3. Important Past Experiences:

- Saw a traveling world-famous jazz ensemble perform during trip to a city when she was ~10 years old, sparking a love for music, especially jazz
- At 18 years old, was admitted to [Name] University, a top music institution
 - It was at this university that Kimi met Mr. Walsh, a former alumni of the jazz ensemble
 - Going to this music university widened the rift between Kimi and her parents, which disapproved of her decision, seeing a lack of money and stability in that career field

Part 3: Psychology

Character Likes: Music (*Jazz*), playing the drums, weightlifting, dancing, coffee, chocolate cookies, Mr. Walsh

Character Dislikes: Judgemental & narrow minded individuals, bigotry, her parents (sometimes), sugary drinks

Biggest Strengths: Outgoing personality, self-advocate, very determined and confident, easy to talk to

Biggest Flaws: Stubborn, often to her own detriment, obsessive

What angers them?: Parents (sometimes), arrogant people lacking credentials, liars, hypocrites

What bores them?: Chess, golf, lectures, etc. (Activities that are not movement-heavy)

Hobbies: Playing and listening to music, weightlifting, dancing

Pet Peeves: Braggers, unsolicited advice givers, arrogant people lacking credentials

Wishes/Goals?: graduate university, join a world-famous jazz ensemble

Regrets: Trying to hide/mask her identity under pressure

Obsessions: Jazz ensemble

Character #2

Part 1: Surface Level

1.1. Absolute Basics

Name: Arthur G. Drache

Age: 48

Pronouns: he/him

Role: Customer

Race: Caucasian

Ethnicity: American

Occupation: Owner and CEO of major film studio

Nationality: American (U.S.)

1.2. Physical Appearance

Eye Color: Emerald

Build: Tall, full chest and broad shoulders

Hair Color: See part 4 below

Hair Style: See part 4 below

Typical Clothing: See part 4 below

Accessories: Wrist watch, rectangular frame glasses with exposed lenses on bottom

Stance/Posture: Very formal, upright and almost robotic posture

Distinguishing Mannerisms or Habits: Crosses legs when sitting, brushes bangs to the side, tendency to take long pauses before responding

Other:

1.3. Communication

General Speech Type: Formal, direct, very articulate, no slang or cusses, confident but not condescending

Speech Impediments: None

Instructions for Facial Reactions (Emotive Sprites):

- Neutral: A stagnant blank face with little emotion
- Happy: One raised eyebrow with one side of mouth pulled up into slight smirk
- Upset: Very stern, scrunched eyebrows, cold + angular eyes, tensed jaw and tight lips
- Surprised: Raised eyebrows and wide eyes with mouth closed.

Part 2: Past and Relationships

2.1. Family:

- Father: Born in Germany with dual citizenship, owner of a massive robotics company.
- Mother: Former Opera singer
- Younger Sister: College educated business and management major, set to take over Father's company when he retires. Oversees sales and distribution.
- Family never approved of Arthur, saw him as a failure with few skills or talents. He could never take over the company. Younger sister was the favorite as soon as she was born, and was naturally talented at most things unlike her brother.

2.2. Important Relationships:

- Parents: Openly resentful of parents for casting him aside and thinking little of him. Has cut off communication with them. Inspired his lifetime goal of proving them wrong out of spite.
- Younger Sister: Is thankful for younger sister never trying to act better than him or rub her success in his face, but is secretly resentful towards her for not defending him from parents' verbal abuse and speaks to her rarely.

2.3. Important Past Experiences:

Part 3: Psychology

Character Likes: Film (in general), directing film, opera music (as a result of his mother), watch collecting, traveling, language learning, mild tea, cheesecake

Character Dislikes: Parents, gaudy and overly extravagant decorations, condescension, people that remind him of his younger self (lack of confidence, self-loathing, lack of ambition, etc.)

Biggest Strengths: Knowledgeable about business, film directing, negotiation, public speaking, language speaking

Biggest Flaws: Guarded and slow to trust, difficult to approach, perfectionist

What angers them? See dislikes

What bores them?: Shallow action films, business meetings

Hobbies: Watch collecting, traveling, language learning

Pet Peeves: Being spoken over/interrupted, people giving advice in areas they know nothing about

Wishes/Goals?: Becoming the largest revenue film studio internationally

Regrets: Waiting so long to reinvent himself, conflicted about pushing certain people away in order to achieve personal goals (i.e. pushing away friends in youth that cared about him but were not conducive towards his goals)

Obsessions: Proving his parents wrong

Part 4: Additional Notes and Artist Instructions

A longer hairstyle that still remains functional and professional looking with a middle part that clears bangs from in front of eyes.

Hair Color: Dark brown or black with strands of gray mixed in.

Arthur has a goatee around the mouth.

The rest of his face is clean shaved.

Dress Coat: Turquoise -> White on fur lapel. Cut off just above the belt. Bottom part of the outfit is white dress pants.

Under Shirt: Burgundy dress shirt

Character #3:

Part 1: Surface Level

1.1. Absolute Basics

Name: Lillia Orbeck

Age: 26

Pronouns: she/her

Role: Coworker, works at the cafe

Race: Caucasian

Ethnicity: American

Occupation: Cafe Employee

Nationality: American (U.S.)

1.2. Physical Appearance

Eye Color: Heterochromia (Blue-Green, Green)

Build: "Chubby" (healthy amount of body fat), wide hips

Hair Color: Platinum Blonde

Hair style: See reference photos

Typical Clothing:

1. Light gray dress pants, lilac purple blouse with ribbon in center of chest, white dress shoes

Accessories: Sister's silver brooch, various rings, ear piercings, sunglasses on head

Stance/Posture: Prideful

Distinguishing Mannerisms or Habits: Covers mouth with hand when laughing, makes up words that sound sophisticated, hands on hips

Other: None

1.3. Communication

General Speech Type: Blunt, Direct, Arrogant and Condescending, likes to use Sarcasm

Speech Impediments: None

Instructions for Facial Reactions (Emotive Sprites):

- Resting: Sly grin and downward looking condescending eyes with head tilted back
- Happy: Wide sparkling eyes with mouth wide open
- Upset: Pouty mouth, downward eyes
- Surprised: Wide eyes and small O-shaped lips
- Laughing?

Part 2: Past and Relationships

2.1. Family:

- Lillia's parents are descendants of influential families centuries past their historical peaks, they come from money and therefore spoil Lillia.
 - They do not have high expectations or demands of Lillia and allow her to do what she likes within reason.
 - They have a tendency to easily cave to her demands.
 - She is very arrogant, rude, and condescending as a result of her upbringing. Her parents praise her for everything, inflating Lillia's ego while trivializing every accomplishment. This has the drawback of making Lillia very insecure when she does fail. She responds to this insecurity by worsening her behavior. (Insecurity feedback loop)
- Fiona: Fiona is Lillia's older sister. Fiona was several years older than Lillia. She is now deceased.

2.2. Important Relationships:

- Gerard: Orbeck family head butler. He dotes on Lillia's every need, but disagrees with his employers' treatment of Lillia. He is often stricter with her when possible.
 - Lillia acts frustrated on the surface, but appreciates Gerard. She spends more time with him than her parents and sees him as a father figure. He is hard on her, but it is because he has faith in her and encourages her to improve herself.

2.3. Important Past Experiences:

Part 3: Psychology

Character Likes: Sweets, luxury clothing and accessories, Parents, Gerard, traveling, being praised, iced coffee

Character Dislikes: Formal etiquette, family responsibilities, being told no/she's wrong

Biggest Strengths: Finds starting and maintaining "conversation" easily

Biggest Flaws: Listening skills, proper etiquette, accepting being wrong/making mistakes, compromising for others

What angers them?: Being wrong/making mistakes, being told no/she's wrong, not being the center of attention

What bores them?: Acting proper and uptight, traditional education and private tutoring

Hobbies: Tennis, shopping

Pet Peeves: Being interrupted when speaking (hypocritical), people who can't directly say what they mean

Wishes/Goals?: Be more like her older sister

Regrets: Not spending enough time with/appreciating Fiona

Obsessions: New fashion

Character #4:

Part 1: Surface Level

1.1. Absolute Basics

Name: Liuna

Age: 32

Pronouns: they/them

Role: Customer

Race: Biracial (Caucasian, Asian)

Ethnicity: Indigenous people of the Arctic

Occupation: Graphic novel/comic book artist

Nationality: American (U.S.)

1.2. Physical Appearance

Eye Color: Brown

Build: Petite

Hair Color: Black

Hair style: rope braid or high bun

Typical Clothing: See reference photos

Accessories: Silver chain necklace

Stance/Posture: Somewhat hunched or slouched until they correct themselves

Distinguishing Mannerisms or Habits: Pencil flipping, tapping writing utensil against cheek, unconsciously makes themselves look small due to lack of confidence/self-consciousness

Other: Scars across bridge of nose and near mouth

1.3. Communication

General Speech Type: Deaf and nonspeaking, uses ASL or writes in a notebook to communicate

Speech Impediments: Cannot speak, uses sign language to talk to family/SO, writes on spiral-bound notepad for others

Instructions for Facial Reactions (Emotive Sprites):

- Resting: Mostly neutral facial expression with reserved, calm smile
- Happy: Eyes downward and partially closed (bashfulness) with more pronounced smile
- Upset: Stern eyes with frown
- Surprised: Raised eyebrows widened eyes with mouth slightly agape

Part 2: Past and Relationships

2.1. Family:

- Immediate family is middle class. They are very supportive of their child and encourage them to achieve their dreams. They learned ASL to communicate with Liuna.

2.2. Important Relationships:

- SO: Their romantic partner is the writer for Liuna's graphic novel. The two make an excellent creative team. The SO has known Liuna since high school and learned ASL language to communicate with them.

2.3. Important Past Experiences:

- Liuna completely lost their hearing at a young age, leading to them being unable to properly vocalize.
 - They were self-conscious because they were different
 - As they grew older they accepted their limitations and grew more confident as they developed strategies and met supportive people
- Liuna experienced bullying in school
 - Their face was scarred due to a physical altercation with another student in middle school.
 - Despite gaining more confidence, they remain self-conscious of their face as a result of their scarring

Part 3: Psychology

Character Likes: People with patience, reading (novels and graphic novels) drawing, painting, cold weather, hot chocolate, pastries, Kung Fu and Samurai films

Character Dislikes: Impatient people, privileged people, hot weather, bitter or tart foods

Biggest Strengths: Patience, empathetic person, good listener, artistic skills

Biggest Flaws: Lack of confidence

What angers them? Impatient people, being looked down on

What bores them?: Corporate/Publisher meetings

Hobbies: reading, writing poetry, watching classic films, role playing

Pet Peeves: Being talked over, being asked to order right after getting the menu

Wishes/Goals?: Produce an award-winning graphic novel with their SO

Regrets: Not answering their SO's initial admission of affection out of fear

Obsessions: Their current graphic novel

Character #5:

Part 1: Surface Level

1.1. Absolute Basics

Name: Amari

Age: 35

Pronouns: she/her

Role: Boss, owns the cafe

Race: Unsure Correct Classification (Middle Eastern)

Ethnicity: Arab-American (Use this for inspo on accessories)

Occupation: Cafe Owner and Manager

Nationality: American (U.S.)

1.2. Physical Appearance

Eye Color: Hazel

Build: Average build

Hair Color: Dark Brown

Hair style: See Part 4 Below

Typical Clothing: See Part 4 Below

Accessories: Ornamental clasps to hold hair loops, wrist watch, earings

Stance/Posture: Upright and confident

Distinguishing Mannerisms or Habits: Very emotive with hands while talking

Other: None

1.3. Communication

General Speech Type: Motherly (kind hearted and soft-spoken, can be stern and authoritative when upset or critiquing behavior)

Speech Impediments: None

Instructions for Facial Reactions (Emotive Sprites):

- Resting: slight warm smile, soft eyes
- Happy: “Proud mom” vibes, slight scrunched eyes with wider smile, closed mouth
- Upset: “Angry mom” vibes, piercing silent glare, pursed lips
- Laugh: Grin with one eyebrow raised, “a reluctant or restrained chuckle”

Part 2: Past and Relationships

2.1. Family:

- Parents
 - She is on good terms with her parents.
 - Amari refuses to ask for help from her parents despite struggling financially.
- Lucian
 - Lucian is Amari's son.
 - 18 years old, Senior in High School
 - Has cerebral palsy
- Lucian's Father has been out of their life since before Lucian was born.

2.2. Important Relationships:

- Lucian
 - Amari pays for his equipment (braces), physical therapy, and medication
 - Lucian has become more independent, and has made friends that help transport him to places, but Amari still aids him with more personal tasks (i.e. getting dressed) and medical appointments.

2.3. Important Past Experiences:

- Amari had Lucian when she was only 17 years old, leading to judgment from her peers
 - Rumors spread about her, was chastised for being a young single mother
 - Verbally bullied by peers
 - Parents were shocked and initially upset, but came around to accept the situation, tried to be supportive parents
 - Lucian was diagnosed with CP before she graduated HS, her parents cared for him when needed so that she could attend college and work

Part 3: Psychology

Character Likes: Lucian, baking, coffee, dark fantasy novels, horror

Character Dislikes: Self-entitlement, impatience, chronic complainers, bullies, insects

Biggest Strengths: Understanding, empathetic, socially intelligent, confident

Biggest Flaws: Has to be conscious of being too lenient, stubborn about not asking for help

What angers them? Entitled people and bullies, misrepresentation of people, evening talk shows

What bores them?: Pure drama

Hobbies: Watching films, reading, swimming

Pet Peeves: Dishes not being done, silverware organized at end of shift

Wishes/Goals?: Expand her cafe into a large establishment

Regrets: Not being able to ask for help from parents

Obsessions: -

Part 4: Additional Notes and Artist Instructions

As the cafe's owner and manager, Amari should wear professional attire. Amari has thick shoulder-length hair that parts to one side. She has long bangs and bundles of hair clasped on either side of her cheeks . Perhaps a ponytail of some kind would work in the back. Accentuating a strong nose and full eyebrows would be great.

Character #6:

Part 1: Surface Level

1.1. Absolute Basics

Name: Nia

Age: 21

Role: Main character, works at the cafe

Pronouns: she/her

Race: Caucasian

Ethnicity: Irish-American

Occupation: Cafe Waitress

Nationality: American (U.S.)

1.2. Physical Appearance

Eye Color: Green

Build: Average

Hair Color: Red-Orange/Ginger

Hair style: See reference photos

Typical Clothing: Loose fitting clothing, no uncomfortable textures, formal enough to be at a job but still something they'd actively choose to wear

Accessories: Nose stud piercing

Stance/Posture: Reserved, a bit timid

Distinguishing Mannerisms or Habits:

Other: Diagnosed Autism late teens, Self-diagnosed ADHD around same time

1.3. Communication

General Speech Type: Soft-spoken, timid, noncommittal

Speech Impediments: None

Instructions for Facial Reactions (Emotive Sprites):

- Resting: A relatively neutral expression. Listening.
- Happy: Nia smiling brightly, mouth closed. Almost a laugh.
- Upset: Squinted glare. A hint of "I can't believe this shit"
- Nervous: Nia's right arm is fidgeting with her necklace in this portrait. Frown, eyes pointing downwards and to the side
- Overwhelmed: A proper expression of overwhelmed panic. Rough and pained. Hide Nia's eyes while showing her mouth (an uncomfortable squiggly line), hunch her somewhat, and dig a tense hand through her hair.

Part 2: Past and Relationships

2.1. Family:

- Family's socioeconomic status is middle class
 - Family is well-off enough to live comfortably and to afford to have her officially diagnosed, but not enough that she doesn't need income to afford college
 - Father: Software designer
 - Mother: Nurse (RN)

2.2. Important Relationships:

- Jackie: Female friend of the same age. They met in high school. Jackie has been diagnosed with ADHD. Jackie is a kind and supportive friend that Nia can often rely on and relate to.
 - Nia has a slightly easier time communicating with people similar to her, or people deemed "different"
 - Jackie has advised Nia regarding her particular habits/behaviors and has suggested she may have ADHD based on her personal experiences

2.3. Important Past Experiences:

- Nia has been perceived as different and as a social outcast growing up as a result of her Autism
 - Bullied and excluded by other kids
 - Difficulty "fitting in" or forging meaningful relationships
 - Adults and teachers especially misunderstand her and her needs
 - Her behavior is formed and reinforced by her past experiences
 - Was already reserved and socially awkward, being excluded simultaneously stunted social growth while decreasing her self-confidence
- Mindset changed when diagnosed with Autism in her late teens
 - Believing she was doing something "wrong" or making incorrect decisions compared to others -> Understanding that her traits are a part of who she is and are out of her control
 - With better understanding of her traits, she can better manage her condition, more effectively address traits
 - (i.e. an individual mistaking ADHD for anxiety and using strategies for managing anxiety to manage ADHD symptoms.)

Part 3: Psychology

Character Likes: Animals/wildlife, mythology, video games (cozy games)

- Nia is particularly interested in the psychology of animals, people, etc.

- This manifests as wanting to pry into people's lives or at least understand why they think the way they do
 - Also manifests as being interested into why people react the way they do to stories
 - Part of the reason why Nia wants to be a vet is because that involves understanding animal behaviors
- When special interests are mentioned, Nia has the urge to infodump/explore her interests with the person she's talking to
- Nia is particularly interested in video game storytelling
 - Liuna and Nia could talk about the difference between that and graphic novel storytelling
- Nia is particularly interested in mythology, especially Greek
 - She wants to understand how storytelling and human psychology interact to create the myth

Character Dislikes: Talking with strangers, being talked down to, unsolicited advice givers (especially neurotypical people trying to solve her “problems”)

Biggest Strengths: Organization, following directions

Biggest Flaws: Socially awkward, lacks confidence and ability to assert herself, difficulty holding conversation, difficulty reading the room

What angers them? Being shunned or ridiculed for things outside control, organization methods being altered/messed with, plans being altered

What bores them?: Textbook reading

Hobbies: hiking, documentary watching, video games

Pet Peeves: Personal things being moved/work space being altered, loud chewing

Wishes/Goals?: Become a veterinarian

Regrets: Not being more outgoing

Obsessions: see likes above

Appendix B - Narrative Outline

Before writing the content of the events in the narrative, the team outlined the goals of each interaction in a table. This table was referenced when writing each event.

Event Name	Location	Non-Nia Character	Non-Nia Character Objectives	Nia Objectives	Neurodivergent Needs/ Behaviors	Nia's Tone	Primary Writer
Start of Act 1							
D1S	The train station	-	-	Establish some of Nia's personality outside of a stressful environment Show Nia's curiosity, passions in people and psychology Show Nia's interest in people by having her people-watch in the stations Why did Nia go for this job? College, but also her interest in people and desire to understand them Segway Nia's emotions into the start of her job	Special Interests	Passionate -> Anxious	Mitch
D1T	Counter	Amari	Amari introduction Brief description of Nia's tasks Tutorial	Establish Nia's lack of confidence, nervousness Nia is afraid to ask too many questions	Eye Contact, Stimming, Masking	Anxious	Harmoni, Lena
D1E1	Tables	Kimi	Kimi is a tolerable person Contrast outer appearance with personality Kimi likes music; fav is jazz, plays drums	Show Nia's lack of confidence Establish Nia's pressure to maintain professional appearance Nia judges Kimi's appearance but realizes she's wrong	Eye Contact, Stimming, Rejection Sensitive Dysphoria (RSD), Masking	Apprehensive	Mitch
D1E2	Tables	Arthur	Arthur is a serious, jaded individual Owns company/directs films	Nia over-corrects from her snap judgment of Kimi, trying to push her initial impression aside Continue stressing Nia's pressure to maintain	Eye Contact, Stimming, RSD, Masking	Tense	Mitch

			Hint at conflict with parents Critiques Nia's behavior	professionalism, be polite despite a conversation that doesn't interest/involve her feedback Show that Nia can be riled up, but that she keeps her cool (Low In/Out)			
D1F	Counter	Amari	Brief Check-in Amari is in a hurry, Nia unable to ask additional questions due to social anxiety	Establish Nia's desire for clear guidance and direct instructions	Consistent Routine, Clear Instructions	Serious -> Disappointed	Harmoni
D2P	Break Room	Lillia	Introduce Lillia as a nonchalant, rude individual, is slightly annoyed by Nia Lillia talking on phone and blocking facility, Nia needs to ask her to move	Nia is hesitant to ask for something simple as a result of catastrophizing and worries afterwards about bothering Lillia	RSD, catastrophizing	Apprehensive	Lena
D2E1	Counter	Lillia	Lillia forces an order onto Nia Create conflict with Nia by not respecting her organization methods, downplays the necessity Begrudgingly accepts Nia's insistence	Show Nia's struggle with balancing being a helpful/productive coworker and managing the stress of having tasks thrown at her Demonstrate Nia's <i>needs</i> (consistent routine and organization)	Consistent Routine, Clear Instructions, Trouble with sudden change	Apprehensive	Lena
D2E2	Tables	Liuna	Liuna is non-speaking Liuna clarifies their needs for communication (notebook),	Nia is taken back at first and then worried about communication Nia gets to briefly talk about her interests and express herself	RSD, Stimming, Oversharing/ Impulsive	Uncertain -> Relaxed	Mitch, Lena, Harmoni

			(This first interaction sets expectation for speech style going forward) Liuna is an artist working on a graphic novel	Nia and Liuna bond over difficulty communicating in a world that doesn't account for their styles			
D2F	Break Room	Lillia	Lillia responds poorly to Nia saying goodbye for the day	Nia attempts to reach out and mend the tension between herself and Lillia by saying goodbye	RSD, Overthinking	Apprehensive	Lena
D3P	Break Room	-	-	Nia reflects on her experiences: 1. Customers 2. Need for guidance 3. Lillia	Overthinking	Apprehensive	Mitch
D3E1	Tables	Arthur	Further critiques Nia's behavior Label Nia's neurodivergent behavior as "dangerous" to her Make it clear he sees himself as "helping" or "guiding"	Show again that Nia can be riled up, but that she can remain professional (High In/ Low Out) Nia does not strongly fire back at Arthur	Stimming, Eye Contact, masking	Frustrated	Mitch
D3E2	Tables	Liuna	Liuna mentions about previous conversation with Arthur, lightly encourages Nia to advocate for herself Liuna talks more about their art, their partner Liuna asks Nia if she has specific needs as well Liuna intentionally gives Nia agency in conversation to	Nia learns from Liuna how to communicate her specific needs Nia learns from Liuna that it is important to advocate for herself, stand up for herself Nia gets to talk briefly about Liuna's art Nia gets to talk substantially about her special interests in storytelling	Special Interest, Happy Stimming (happy portrait bounces)	Cheerful	Mitch , Lena, Harmoni

			allow her to talk about her interests.				
D3F	Counter	Amari	Amari has another brief check-in with Nia Amari gets an opportunity to discuss a little more about herself, mentions Lucian briefly mentions his condition	Nia wants to advocate for herself more and speaks about further instructions Nia asks Amari about Lillia	RSD	Assertive -> Curious	Harmoni
D4P	Break Room	-	-	Nia considers what she learned about Lillia from Amari, thinks maybe she can "figure her out" Wants to get along with her if possible	Special Interest	Optimistic	Mitch
D4E1	Counter	Lillia	Lillia forces another order onto Nia Further stress that Lillia cannot empathize with Nia, doesn't understand her needs and does not try to	Nia's needs are not being met, she becomes anxious and agitated Nia decides to be a little more forward with Lillia about her needs	Consistent Routine	Frustrated	Lena
D4E2	Tables	Kimi	Paint Kimi as multi-faceted (Tomboyish, but also likes cute/nerdy stuff) Indirectly encourage Nia by being proud of herself Kimi studies music Wants to be in jazz group, is confident in her skills	Nia reflects briefly on previous assumptions Nia is inspired by Kimi's observable confidence in her identity Nia asks Kimi about her love for music to understand her better Nia decides to share some of her interests as a result of seeing Kimi	Special Interest	Inspired	Mitch

			Conflict between her and parents				
D4F	Counter	Lillia, Amari	Conflict between Nia, Lillia, and Amari Amari doesn't fully understand situation, but knows Lillia is causing problems Lillia thinks she is being replaced	Nia is internally frustrated by Lillia's lack of respect for her needs Things teeter-totter in her head about confronting her again, but Amari comes in before she can decide what to do Nia initially doesn't process Amari's interruption of the conversation because she's talking to Lillia	Consistent Routine, difficulty context-switching and talking to multiple people	Aggressive	Harmoni, Lena
End of Act 1							
Start of Act 2							
D5Am 1	Counter	Amari	Amari provides some instructions to Nia Amari provides context for reader (what is happening in the station)	Nia asks Amari what happened, why are they stuck, what to do. Nia is worried about what this means for the day and expresses some anxiety	Sensory overload, consistent routine, stimming	Fearful	Harmoni
D5L1	Tables	Liuna	Liuna talks about their passions besides art Discussion between Liuna and Nia about what is happening around them in the station, (What they think about the situation, what they know, and perhaps mention of a past negative experience that either bothered them or	Nia is calmed somewhat by discussion with Liuna	-	Calmed	Mitch, Lena, Harmoni

			involved the police)				
D5C1	Counter	Lillia	Lillia forces an order onto Nia and makes excuses for why she can't do it Uses situation as an excuse as to why she isn't accommodating Nia, but comes off as petty and retaliatory	Nia initially tries not to start trouble, but her frustration boils over Nia speaks her mind to Lillia about how she feels Nia asserts that while she is different from Lillia, she still deserves respect	Anger at needs being ignored	Frustrated, Assertive	Lena
D5Am 2	Counter	Amari	Amari apologizes for lack of instructions and makes an effort to listen to Nia and her needs Amari offers some suggestions/solutions to help Nia Amari expands on her son's condition, decides to better understand Nia in order to perhaps better understand her son's needs as well.	Nia confronts Amari about a lack of clear communication and a need for streamlined instructions Is getting overwhelmed with the number of customers, people talking, etc.	Sensory overload, consistent routine	Assertive	Harmoni
D5A1	Tables	Arthur	Arthur discusses some of his interests besides film Arthur is critical of Nia's interests in terms of how "useful" they are/ how much potential they have Show how little interests he has, hint at some	Nia interjects, talks about what she is pursuing for an education and discusses her interests there Nia defends her interests	Special interests, RSD	Defensive	Mitch

			interests he gave up on to find success				
D5K1	Tables	Kimi	Relations with parents boil over Judgment for personality/clothing	Nia is unsure exactly how to comfort Kimi Nia assures Kimi that she doesn't see her the same way she sees herself	Social awkwardness expressing empathy (she feels it, but doesn't quite know what to say or how to say it), difficulty with tone	Uncertain	Mitch
D5S1	Tables	-	Overwhelmed sequence	Nia is experiencing sensory overload (loud, multiple conversations, sudden changes) Nia's emotions and struggles dealing with how people perceive her, her lack of bandwidth, and frustrations come to a head, she expresses anxiety around these things	Sensory overload, attention, consistent routine, RSD	AAAAAA	Lena, Harmoni
D5S2	Break Room	-	Nia takes a break	Nia experiences a shutdown and needs to take a break in the break room	Sensory overload/ meltdown	AAAAAA	Lena, Harmoni
D5S3	Counter	Lillia, Amari	Aside where Lillia and Amari discuss Nia	-	-	-	Lena, Harmoni
D5S4	Break Room	-	Recovery	Nia recovers after a prolonged break, calms herself, and manages thoughts	Recovery from overload	Soothed	Lena, Harmoni
D5Am 3	Counter	Amari	Amari tells Nia she doesn't have to work, Nia asserts that she wants to	Nia asserts that she wants to come back to work for herself	-	Assertive	Harmoni
D5L2	Tables	Liuna	Liuna is asked by Nia about their condition/ experiences	Nia talks with Liuna about her insecurities and disappointment with herself	Special interest	Uncertain	Mitch, Lena, Harmoni

			<p>Liuna's gender mentioned</p> <p>Liuna discusses a little about their backstory and how their mindset has shifted</p> <p>Scar mention</p>	<p>Nia asks Liuna more about her condition/experiences in order to learn how to overcome some of her struggles</p> <p>Nia sees Liuna as a role model/representation of what she wants to be</p>			
D5C2	Counter	Lillia	<p>Lillia makes small changes to accommodate Nia without Nia seeing them</p> <p>Lillia sees that Nia's needs are actual necessities, has some reflection and decides to try be nicer</p> <p>Lillia is embarrassed to admit she's making changes for Nia</p>	<p>Nia immediately realizes that things are arranged in a way that helps her</p> <p>Nia questions Lillia about it</p> <p>Nia suspects that Lillia isn't being honest, but doesn't quite understand why</p>	Consistent routine	Appreciative	Lena
D5K2	Tables	Kimi	<p>Foreshadow some of Kimi's insecurities</p> <p>Kimi says she noticed Nia was gone for a while, asks whats up</p> <p>Kimi states that Nia doesn't have to share but also shouldn't dismiss her own feelings and needs</p> <p>Once Nia shares, Kimi is supportive/encouraging</p>	<p>Nia initially dismisses her own emotions, but is encouraged by Kimi to open up. Provides the basis for when Nia encourages Kimi to follow her own feelings later.</p>	Dismissing oneself/masking	Self-Dissimisive -> Introspective	Mitch
D5A2	Tables	Arthur	<p>Seeds of doubt are planted in Arthur as a result of Nia's refusal to</p>	<p>Nia asserts herself, refuses to be changed completely by Arthur</p>	-	Assertive	Mitch

			completely change Arthur doubles down, tells of his friends that he gave up on because they were "bad influences"	Nia tells Arthur that what he did sounds lonely			
D5K3	Tables	Kimi	Kimi reveals insecurities about music career	Nia has a difficult time deciding the best thing to say Nia wants to understand why Kimi feels the way she does Nia decides to relate Kimi's insecurities to her own as well as her career interests	Difficulty communicating, special interest, RSD	Uncertain -> Impassioned	Mitch
D5A3	Tables	Arthur	Arthur realizes that what he is doing is toxic, same as his parents Acknowledges what he gained, but also what he lost, by changing behavior Acknowledges that his help was unwarranted	Nia reacts with surprise at how vulnerable Arthur is being Reconsiders some initial assumptions	Difficulty context switching	Surprised	Mitch
D5C3	Counter	Lillia	Lillia opens up somewhat, talks about her own worries	Nia hears Lillia out	-	Compromising/Sympathetic	Lena
D5L3	Tables	Liuna	Liuna discusses progress on their graphic novel	Nia and Liuna share in discussion of their interests	Special interest	Passionate	Mitch, Lena, Harmoni
D5Am 4	Counter	Amari	Amari lets Nia know she can take a couple days off and that she appreciates her doing what she can today	Nia agrees to take the time and think on things	Recovery from overload	Relieved	Harmoni

End of Act 2 - Recovery for a couple days between

Beginning of Act 3: Themes of contentment, adjusted to the workplace, setting boundaries, etc.							
D6P	Void	-	-	<p>Nia, sitting outside of the shop in the train station, takes the time to process things that happened over that day at work.</p> <p>Reflects a bit on what she did for the time off She's gotten a bit more relaxed now, but still has lingering anxieties, especially around whether people will be mad at her</p> <p>Nia braces herself and goes back to work</p>	RSD	Reflective	Mitch
D6Am 1	Counter	Amari	<p>Amari welcomes Nia back</p> <p>They take a moment to talk together about how to go forward with work. Awkward at first</p> <p>Amari talks a bit about the nature of work, how it sucks stressing, understanding each other, etc</p> <p>Mentions Lucian or elaborates on him</p>	<p>Nia makes herself small at work by avoiding people, including Amari and Lillia.</p> <p>Nia apologizes profusely for what happened at work, but is cut off by Amari saying it's not Nia's fault and not to apologize for it</p> <p>Nia explains some of the emotions involved a little further, worries about work and whatnot</p> <p>Nia talks about her goals for work</p> <p>I'd like to work some of the relationship between worker and boss in here</p>	<p>Profuse apologizing, feeling eyes on you, RSD</p>	<p>Apologetic -> Trusting</p>	Mitch
D6K1	Tables	Kimi	<p>Kimi is encouraged by Nia to pursue her dreams</p>	<p>Nia and Kimi talk about their passions somehow. A little more intimate than other conversations</p>	Special interest	Open	Mitch
D6KF	Tables	Kimi	Occurs if the player doesn't gain Kimi's favor.	<p>Nia is disappointed but doesn't want to push Kimi into territory she's uncomfortable with</p>	RSD	<p>Disappointed but understanding</p>	Mitch

D6KS	Tables	Kimi	Occurs if the player gains Kimi's favor Kimi says she'll be going for a band gig and if she lands it she'll get Nia tickets	-	Excited	Mitch	
D6A1	Tables	Arthur	Arthur expresses more of his "old", "suppressed" personality shine through, clearly lost in planning for his premier	Nia is very curious about this behavior from Arthur. She feels like she sees something suppressed poke through his facade.	Special interest	Curious	Mitch
D6AF	Tables	Arthur	Occurs if the player doesn't gain Arthur's favor. Arthur falls into his old patterns while planning and while talking to Nia. Perhaps this is reflected somehow in the plans he decides on.	Nia is frustrated to see her efforts at bridging the gap "go to waste"	RSD	Frustrated	Mitch
D6AS	Tables	Arthur	Occurs if the player gains Arthur's favor Arthur lets go of toxic standards Arthur asks Nia to attend film premiere, partially as a way of "apologizing" for being judgmental (he states this)	Nia feels like she understands Arthur's thinking a little better	Special interest	Excited, surprised	Mitch
D6C1	Counter	Lillia	Not perfectly sure what to do with this segment. Maybe provide a chance for people	Nia is essentially like "I'll take it" as Lillia makes efforts to do better.	-	Frustrated	Mitch

			to see a little more into why Lillia thinks and acts the way she does? Or bring other sections up to here				
D6CF	Counter	Lillia	Occurs if the player doesn't gain Lillia's favor. Lillia dismisses Nia, ultimately not willing to try to get along with her. Their relationship sort of fades from there.	Nia decides she's done capitulating to Lillia's attitude and just decides to make do. Wonders if things could've turned out differently somehow	RSD	Anxious, Disappointed in self, Frustrated	Mitch
D6CS	Counter	Lillia	Occurs if the player gains Lillia's favor. Lillia gives Lillia extends an olive branch to Nia and asks her if she wants to get lunch together sometime	Nia decides to return the favor and offers Lillia the chance to chat	-	Sympathetic	Mitch
D6L1	Tables	Liuna	Liuna talks a bit about their partner, the graphic novel, and following your creative vision	Nia talks about wanting to be a veterinarian, understanding people	Special interest	Open	Mitch
D6LF	Tables	Liuna	Occurs if the player doesn't gain Liuna's favor. Liuna ultimately is amicable with Nia, but doesn't offer her direct inspiration	Nia regrets not getting to know Liuna a little better	RSD	Regretful	Mitch

D6LS	Tables	Liuna	Occurs if the player gains Liuna's favor. Liuna invites Nia to a small local book store signing for their graphic novel	Nia excitedly accepts the invitation	-	Excited	Mitch
D6P2	Station -> Void	-	-	Nia clocks out, relieved to be done with the day She recounts how she kinda spent the day in a haze and said goodbye to Amari on the way out Nia wraps up the week and reflects on things going forwards, calls it a night and kinda collapses in bed	Social exhaustion	Somber, Contemplative	Mitch
D7KS	Void	Kimi	Occurs if the player gains Kimi's favor. Kimi is expressing her desires and passion Kimi offers headphones to Nia to account for her discomfort Nia watches her rock it on stage Kimi, by inviting Nia, is also expressing that Nia helped inspire her Kimi shouts out Nia?	Nia reflects on Kimi's gig, which she was invited to by Kimi a later day Nia goes to Kimi's gig, despite being wary about the noise and people there. Ends up really enjoying herself, admiring how Kimi can be herself so freely Nia bashfully but thankfully accepts Kimi's kind words Reflection on friendship and passion	Sensory overload, special interest	Excited, Bashful	Mitch
D7AS	Void	Arthur	Occurs if the player gains Arthur's favor Arthur is chipper and passionate, talking with some high-society film critic or	Nia reflects on the movie premiere She is amazed by all the pomp and circumstance She sees Arthur enjoying himself talking to people as she comes in	Special interest	Excited, awestruck	Mitch

			something when he steps away to talk with Nia Arthur asks what NIA thinks about his film premiere	She watches the movie and loves its exploration of some character			
D7CS	Void	Lillia	Occurs if the player gains Lillia's favor Lillia and Nia take break together Lillia ultimately just says "hey, i don't really like you but i don't wanna start shit between us all the time so i'm gonna just do my best to get along"	Nia reflects on perfectionism as it relates to her desire for approval Ultimately accepts that Lillia has no interesting in getting closer and is essentially like "I'll take it" Lillia tries to do better "I can't make friends with everyone"	RSD, perfectionism	Melancholy, Accepting	Mitch
D7LS	Void	Liuna	Occurs if the player gains Liuna's favor Liuna has "made it" and Nia recognizes that maybe she could do the same someday This is also an expression of their artistic interests Their partner is there, Liuna talks a bit about their trust in their partner	Nia reflects on the book signing. She thinks about how she wants to pursue her own passions someday and be successful She thinks about where she wants to be someday, and how Liuna has managed to get so far without compromising on themselves and with their own struggles. Valuable inspiration for Nia.	Special interest	Inspired	Mitch
D7P1	Void	-	-	Nia's ending Nia thinks about the people she's met, her future Most explicit reflection on game's themes Ultimately positive	Special interest	Contemplative	Mitch

D7P2	Void (+CG of Nia?)	-	Occurs if the player gains everyone's favor.	"True ending" dialogue? Added on to the last scene if you please everyone Should be anti-perfectionist or maybe fourth wall-breaking. it is appreciative of the time you spent but also reflects on how we can't be perfect Should also be ultimately positive	-		Hopeful, appreciative	Mitch
End of Act 3								
Credits	Void	-	-	-	-	-	-	Lena

Appendix C - Informed Consent Agreement

The following is the informed consent agreement agreed to by playtesters.

Informed Consent Agreement for Participation in a Research Study

Investigator: Neurotype Cafe Visual Novel MQP Team

Contact Information:

Lena Dias, lsdias@wpi.edu

Harmoni Larrabee, hjlarrabee@wpi.edu

Mitch Tanguay, metanguay@wpi.edu

Title of Research Study: *Neurotype Cafe Visual Novel MQP*

Sponsors:

Worcester Polytechnic Institute

Advisors:

Rose Bohrer

Ben Schneider

Introduction:

You are being asked to playtest our game, *Neurotype Cafe*. Before you agree, however, you must be fully informed about the purpose of the study, the procedures to be followed, and any benefits, risks, or discomfort that you may experience as a result of your participation. This form presents information about the study so that you may make a fully informed decision regarding your participation.

Purpose of the study:

The purpose of this study is to test what emotional responses this game evokes in players and to test if the project is meeting our design goals.

Procedures to be followed:

You will be asked to complete the following sequence:

1. Download the game file here:
https://drive.google.com/drive/folders/1fvedia_-opuAMWKc15VzgFU4dp1egu9l?usp=sharing Note: the Mac version requires opening the game from the Ren'Py launcher.
2. Unzip the game file (right click on the file > Extract All > Extract)
3. Start the game application by double-clicking the file NeurotypeCafe where the file type is "Application" in the extracted folder
4. Play through the game demo (this should take about 15-20 minutes) until prompted to take the playtesting survey
5. Complete the remaining sections of this survey (this should take about 10-15 minutes)

Risks to study participants:

Risks or discomforts from this research may include being frightened, eyestrain, boredom, and any other risks that come with playing a video game. Additionally, the game contains themes of anxiety and neurodivergent discrimination that may be triggering or uncomfortable for certain audiences. The risks that arise from participation are not expected to be any more than those in daily life.

Benefits to research participants and others:

You will not receive any benefits for your participation other than contributing to the design of this game and the entertainment of playing the demo. If you would like, we will add your name to the credits for the game as a playtester (simply request that we do so at the end of the form). This is not mandatory.

Record keeping and confidentiality:

Records of your participation in this study will be held confidential so far as permitted by law. However, the study investigators, the sponsor or its designee and, under certain circumstances, the Worcester Polytechnic Institute Institutional Review Board (WPI IRB) will be able to inspect and have access to

confidential data that identify you by name. Any publication or presentation of the data will not identify you.

Compensation or treatment in the event of injury:

No compensation or treatment is available in the event of injury, as the risk is minimal. You do not give up any of your legal rights by signing this statement.

For more information about this research or about the rights of research participants, or in the case of research-related injury, contact:

Refer to contact information provided at the top of this form. Contact information for IRB faculty is included below:

IRB Manager (Ruth McKeogh, Tel. 508 831- 6699, Email: irb@wpi.edu)

Human Protection Administrator (Gabriel Johnson, Tel. 508-831-4989, Email: gjohnson@wpi.edu).

Your participation in this research is voluntary. Your refusal to participate will not result in any penalty to you or any loss of benefits to which you may otherwise be entitled. You may decide to stop participating in the research at any time without penalty or loss of other benefits. The project investigators retain the right to cancel or postpone the experimental procedures at any time they see fit.

By signing below, you acknowledge that you have been informed about and consent to be a participant in the study described above. Make sure that your questions are answered to your satisfaction before signing. You are entitled to retain a copy of this consent agreement.

Appendix D - Alphafest Playtesting Form

The following is the survey taken by playtesters at IMGD Alphafest after playtesting the game.

Neurotype Cafe Alphafest Feedback

Thanks for playing! Please answer a few questions:

** Indicates required question*

1. How would you describe Nia (the main character) in one word? *

2. Are you neurodivergent?

Mark only one oval.

- Yes Skip to question 3
 No Skip to question 4
 I'd prefer not to answer Skip to question 4

Neurodivergent

3. Did you feel represented by Nia (the main character)?

Mark only one oval.

- Yes
 No
 Somewhat

Characters

4. How would you describe Kimi in one word? *

5. How would you describe Kimi's facial expressions?

Check all that apply.

- Neutral
- Upset
- Frustrated
- Happy
- Amused
- I didn't notice her expressions

6. How would you describe Arthur in one word? *

7. How would you describe Arthur's facial expressions?

Check all that apply.

- Neutral
- Upset
- Frustrated
- Happy
- Amused
- I didn't notice his expressions

8. How easy to use was the drink prep menu? *

Mark only one oval.

Very difficult to use

1

2

3

4

5

Very easy to use

9. Was there anything in particular that was hard to understand or use in the drink prep menu?

10. Did you feel incentivized to make the right drink for the customers? *

Mark only one oval.

Yes

No

Somewhat

11. Did you ever remake a drink? *

Mark only one oval.

Yes Skip to question 12

No Skip to question 17

Skip to question 17

Remade a drink

12. How helpful was the feedback that the character gave you when you made the drink incorrectly? *

Mark only one oval.

Not helpful at all

1

2

3

4

5

Very helpful

13. Did you ever run out of energy? *

Mark only one oval.

- Yes Skip to question 14
 No Skip to question 17
 I didn't notice Skip to question 17

Skip to question 17

Energy System

14. Did you understand that you couldn't remake a drink because you were out of energy? *

Mark only one oval.

- Yes
 No

15. Did you understand that you couldn't select certain dialogue options because you were out of energy? *

Mark only one oval.

- Yes
 No

16. How frustrating was it to run out of energy? *

Mark only one oval.

Not frustrating at all

1

2

3

4

5

Very frustrating

End

17. Please provide any additional feedback here, including any bugs you encountered.
Thank you for playing and taking the survey!

18. If you need play testing credit, please put your name and WPI email below!

Appendix E - Asynchronous Playtesting Form

The following is the survey taken by playtesters asynchronously after playtesting the game.

1. **By signing below**, you acknowledge that you have been informed about and consent to be a * participant in the study described above. Make sure that your questions are answered to your satisfaction before signing. You are entitled to retain a copy of this consent agreement.

Play the game!

1. Download the game file here: https://drive.google.com/drive/folders/1fvedia_-opuAMWKc15VzgFU4dp1egu9l?usp=sharing Note: the Mac version requires opening the game from the Ren'Py launcher.
2. Unzip the game file (right click on the file > Extract All > Extract)
3. Start the game application by double-clicking the file NeurotypeCafe where the file type is "Application" in the extracted folder
4. Play through the game demo (this should take about 15-20 minutes) until prompted to take the playtesting survey
5. Complete the remaining sections of this survey
(this should take about 10-15 minutes)

COMPLETE AFTER PLAYTESTING - User Interface

Please complete these and all remaining questions after you've playtested the game.

2. What did you think it meant when a character's dialogue was in italics? *
-
3. Was there anything specific about the UI (excluding the drink prep minigame) that was confusing or difficult to use? *
-
-
-
-

4. Was there anything specific about the UI (excluding the drink prep minigame) that you particularly liked? *

Audio

5. Was there anything about the audio that you liked or disliked? *

Minigame

6. How easy to use was the drink prep minigame? *

Mark only one oval.

Very Difficult

1

2

3

4

5

Very Easy

7. How helpful was the tutorial in understanding the drink prep minigame? *

Mark only one oval.

Very Unhelpful

1

2

3

4

5

Very Helpful

8. (Optional) Was there anything in particular that was confusing or difficult to use in the drink prep minigame?

9. (Optional) Was there anything that you particularly liked about the drink prep minigame?

10. How difficult did you find interpreting the drink orders? *

Mark only one oval.

Not Difficult At All

1

2

3

4

5

Very Difficult

11. How did you feel about that level of difficulty? *

12. How many drinks did you make incorrectly on your first try? *

Mark only one oval.

0

1

2

3

Not sure, but at least 1

13. How many times did you remake drinks that you made incorrectly on your first try? *

Mark only one oval.

Not at all

Once

Twice

More than twice

Not sure, but at least once

14. Why did you choose to remake drinks or not remake drinks? *

Energy

15. Did you run out of energy? *

Mark only one oval.

Yes

No *Skip to question 21*

I didn't notice *Skip to question 21*

16. Was there anything in particular you found confusing about the energy bar? *

Ran out of energy

17. When making drinks for which customer did you run out of energy? *

18. Did you notice any consequences of running out of energy? *

Mark only one oval.

Yes

No *Skip to question 21*

Other: _____

Energy Consequences

19. What consequences of running out of energy did you notice? *

Check all that apply.

- I couldn't remake drinks
- I couldn't select certain dialogue options
- Other: _____

20. How did you feel about those consequences? *

Characters

21. How likable did you find Nia (the main character)? *

Mark only one oval. _____

Very Unlikeable

1

2

3

4

5

Very Likeable

22. How interested were you in learning more about Nia (the main character)? *

Mark only one oval.

Very Uninterested

1

2

3

4

5

Very Interested

23. Why did you feel that way about Nia? *

24. How likable did you find Amari (the cafe owner)? *

Mark only one oval.

Very Unlikeable

1

2

3

4

5

Very Likeable

25. How interested were you in learning more about Amari (the cafe owner)? *

Mark only one oval. _____

Very Uninterested

1

2

3

4

5

Very Interested

26. Why did you feel that way about Amari? *

27. How likable did you find Lillia (the coworker)? *

Mark only one oval.

Very Unlikeable

1

2

3

4

5

Very Likeable

28. How interested were you in learning more about Lillia (the coworker)? *

Mark only one oval.

Very Uninterested

1

2

3

4

5

Very Interested

29. Why did you feel that way about Lillia? *

30. How likable did you find Kimi (the customer)? *

Mark only one oval.

Very Unlikeable

1

2

3

4

5

Very Likeable

31. How interested were you in learning more about Kimi (the customer)? *

Mark only one oval.

Very Uninterested



1



2



3



4



5



Very Interested



32. Why did you feel that way about Kimi? *

End

33. Are you neurodivergent? *

Mark only one oval.

Yes

No

Don't know

Prefer not to say

Other: _____

34. (Optional) Please provide any additional feedback here, including any bugs you encountered. Thank you for playing and taking the survey!

35. (Optional) If you need playtesting credit, please leave your email below!

36. (Optional) If you would like to be credited as a playtester in the game's credits, leave your name below!
